

**STAGE 1 AND 2 ARCHAEOLOGICAL
ASSESSMENTS
OF 900 ALBERT STREET
PART LOT 38, CONCESSION 1
OTTAWA FRONT
GEOGRAPHIC TOWNSHIP OF NEPEAN
FORMER COUNTY OF CARLETON
NOW IN THE CITY OF OTTAWA, ONTARIO**



Past Recovery
Archaeological Services Inc.

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Mr. Ryan Moore, Development Manager, Trinity Development Group Inc., provided background material for the investigation, in particular reports from previous environmental site assessments conducted within the property and detailed site mapping.

Mr. Brian Webster, Principal, Stantec Geomatics Ltd., ensured that all test trench locations were staked in the field and that the locations were added to all project mappings.

Ms. Erin Tate, City of Ottawa, provided copies of previous environmental assessment reports.

Mr. Robert von Bitter, Archaeological Data Coordinator with the Ontario Ministry of Tourism, Culture and Sport, conducted a search of the Ontario Archaeological Sites Database for all registered archaeological sites located within 1 kilometre of the study area.

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EXECUTIVE SUMMARY

Past Recovery Archaeological Services Inc. was retained by Trinity Development Group Inc. to undertake Stage 1 and partial Stage 2 archaeological assessments for an approximately 1.6 ha property in the Bayview area, located within part of Lot 38, Concession 1, Ottawa Front, in the former Township of Nepean, now in the City of Ottawa (see Maps 1 to 3). The purpose of the Stage 1 assessment was to determine whether or not the study area, or portions thereof, exhibited potential for the presence of significant archaeological resources and to make recommendations for appropriate steps to be taken to address archaeological concerns prior to the initiation of any development. The purpose of the Stage 2 assessment was to determine whether or not there were archaeological resources with cultural heritage value or interest on the property and to make a determination as whether further assessment was required.

In order to evaluate the archaeological potential of the property, detailed archival research was conducted in order to provide an overview of past land use. Historical mapping was compiled to generate an overlay map showing the locations of nineteenth and early to mid-twentieth century structures in order to identify areas of archaeological interest. Much of the area was determined have potential for the presence of significant archaeological resources, including those associated with both pre-Contact First Nations and post-Contact Euro-Canadian settlement and land uses.

While most of the study area required Stage 2 assessment, it was determined by the proponent that the current Stage 2 would focus on lands owned by the City of Ottawa and Capital Railway, with the remainder of the property deferred to a later date. As the research had determined that the study area contained extensive fill deposits related to its use as a railway yard and later developments, the Stage 2 assessment consisted of the mechanical excavation of nine test trenches targeting potential archaeological remains. Foundation walls from a large roundhouse constructed by the Canadian Pacific Railway in 1883 and removed after a fire in 1910 were encountered in two of the test trenches,

providing evidence for the survival of archaeological deposits relating to this significant railway building over a large area.

The results of the Stage 2 assessment form the basis for the following recommendations:

- 1) The remains of the 1883 Canadian Pacific Railway roundhouse identified in Test Trenches 4 and 7 are considered to have cultural heritage value or interest meriting Stage 3 and Stage 4 archaeological assessment (see Map 21). As Test Trench 4 was located within a restricted space in the active O-Train corridor, the further assessment should be focussed in the vicinity of Test Trench 7, perhaps extending as far north and northeast as Test Trenches 6 and 10. The recommended work should be undertaken by a licensed archaeologist in compliance with *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011).
- 2) As the area is situated within a deeply buried urban brownfield context, the archaeological assessment strategy should consist of the excavation of further mechanical test trenches at Stage 3 to confirm the limits of the roundhouse and associated infrastructure, followed at Stage 4 by the exposing of the structural remains by heavy machinery and detailed recording by hand.
- 3) A comprehensive review of all relevant soils testing environmental assessment reports should be undertaken prior to the initiation of the Stage 4 archaeological assessment in order to identify potential human health risks and determine appropriate mitigation measures, particularly as related to hand excavation involving soil screening and the recovery of artifacts.

The reader is also referred to Section 5.0 below to ensure compliance with relevant provincial legislation as it may relate to this project.

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1.0 INTRODUCTION

Past Recovery Archaeological Services Inc. was retained by Trinity Development Group Inc. to undertake a Stage 1 archaeological assessment for an approximately 1.6 ha property in the Bayview area, located within part of Lot 38, Concession 1, Ottawa Front, in the former Township of Nepean, now in the City of Ottawa (Maps 1 to 3). Part of this property was also to be the subject of a Stage 2 assessment at this time, with the remainder deferred to a later date.

The objectives of the Stage 1 archaeological assessment were as follows:

- To provide information about the geography, history and current land condition of the study area;
- To describe any previous archaeological fieldwork and evaluate the archaeological potential of the study area; and
- To recommend appropriate strategies for Stage 2 archaeological assessment in the event further assessment is warranted.

The objectives of the Stage 2 archaeological assessment were as follows:

- To determine whether archaeological resources, artifacts or sites with cultural heritage value or interest were present on the property; and
- To determine whether these resources required further assessment.

2.0 PROJECT CONTEXT

This section of the report provides the context for the archaeological work undertaken, including a description of the study area, the related legislation or directives triggering the assessment, additional information regarding the proposed development or property to be developed that may impact the archaeological assessment, as well as confirmation of permission to access the land.

2.1 Development Context

The study area is located within part of Lot 38, Concession 1, Ottawa Front, of the geographic Township of Nepean, now in the City of Ottawa (see Maps 1 to 3). The subject property has the address of 900 Albert Street, and is roughly bounded to the north by Albert Street, to the southeast by the former Richmond Road/Wellington Street right-of-way and the former City Centre distribution terminal, and to the southwest by lands surrounding the Tom Brown Arena. The total size of the study area is approximately 1.6 hectares (4 acres).

The main site for the proposed development is to be the 900 Albert Street property (shaded red), where three residential towers are proposed, with a large retail and parking complex at the base (see Map 3). An additional property to the west (shaded blue) is currently owned by the City of Ottawa and Capital Railway, and contains the active O-Train line leading to Bayview Station, as well as the recently completed Champagne Multi-use Pathway (MUP) running along the northeastern side of the active rail corridor. A third property parcel to the southwest of the rail corridor (shaded yellow), consisting of part of the steeply sloped grounds associated with the Tom Brown Arena also owned by the City is also being considered for the development. Plans are underway to incorporate a new O-Train Bayview Station into the development complex, with a possible overhang or building extension spanning the rail line.

An archaeological assessment was required by the City of Ottawa as part of a site plan application under the Planning Act; the property had been flagged given that part was shown as having archaeological potential on the City's *Archaeological Master Plan*.

A detailed survey plan of the entire study area was provided by the proponent (see Map 2).

2.2 Access Permission

Permission to access the subject property and complete all aspects of the archaeological assessment, including photography, excavation, and the recovery of any artifacts found, was granted by the project proponent, the City of Ottawa and Capital Railway.

3.0 STAGE 1 ARCHAEOLOGICAL ASSESSMENT

The purpose of the Stage 1 archaeological assessment is to provide background information about the study area to determine the archaeological potential of the property and to present recommendations for the mitigation of any significant known or potential archaeological resources.

3.1 Historical Context

This section of the report provides a summary of the information gathered in archival research conducted during the Stage 1 archaeological assessment. This includes a summary of relevant local historical information to provide a context for the early settlement history of Nepean Township, the growth of Ottawa, and the development of the community around the study area, as well as detailed property specific archival research conducted to shed light on past and present land uses.

3.1.1 Previous Research

There are numerous publications that provide insight into the history of the study area. Several histories of the City of Ottawa have been published which contain information relevant to the vicinity, including biographical sketches of the early industrialists who erected mills and transportation infrastructure near the Chaudière Falls (e.g. Bond 1984, 1968, 1967; Brault 1946; Eggleston 1961; Mika and Mika 1982; Trinnell 1998). A few thorough accounts of the development of Carleton County have also been written, most notably the nineteenth century *Illustrated Historical Atlas of Carleton County* (Belden 1879) and *Carleton Saga* (Walker and Walker 1968). A history of Nepean Township, *The City Beyond* (Elliott 1991), is an extremely comprehensive and valuable resource with numerous references to the development of the Bayview area in the nineteenth century. Several studies have focussed on the industrial history of the Chaudière area, including the development of railway infrastructure leading into LeBreton Flats (NCC 1982; Forbes Bush 1979; Churcher n.d.a and n.d.b). A report entitled *Mapping, Assessment and Prioritization of Former Land Use in the LeBreton/Bayview Area* by Raven Beck Environmental Ltd. (1991) details the history of industrial land use in the vicinity.

3.1.2 Pre-Contact Cultural Overview

It should be noted that our understanding of the pre-Contact sequence of human activity in the area is very incomplete, stemming from a lack of systematic archaeological surveys in the region, as well as from the destruction of archaeological sites caused by urban and sub-urban sprawl prior to legislated requirements for archaeological assessments to be completed in advance of development. It is possible, however, to provide a general outline of pre-Contact occupation in the Ottawa region

based on archaeological, historical, and environmental research conducted in eastern Ontario.

The earliest human occupation of southern Ontario began approximately 11,000 years ago with the arrival of small groups of hunter-gatherers referred to by archaeologists as Palaeo-Indians (Ellis and Deller 1990:39). These groups gradually moved northward as the glaciers and glacial lakes retreated. While very little is known about their lifestyle; it is likely that Palaeo-Indian groups travelled widely relying on the seasonal migration of caribou as well as small animals and wild plants for subsistence in a sub-arctic environment. They produced a variety of distinctive stone tools including fluted projectile points, scrapers, burins and graters.

Most archaeological evidence for the Palaeo-Indian period has been found in south-western and south-central Ontario at sites located on the former shorelines of glacial Lake Algonquin. First Nations settlement of eastern Ontario was late in comparison to these other parts of the province as a result of the high water levels of the St. Lawrence Marine Embayment of the post-glacial Champlain Sea (Hough 1958:204). Palaeo-Indian find spots in this region include fragments of a Plano (Late Palaeo-Indian) point from the 1000 Islands, two fluted points from the Rideau Lakes, two lanceolate points from Lanark County, two sites with Palaeo-Indian components near the Yarker Training Area along the Napanee River and a late Palaeo-Indian point near Kingston Mills (Heritage Quest Inc. 2000; Watson 1999a:35-38).

The Ottawa Valley remained very much on the fringe of occupation at this time. The ridges and old shorelines of the Champlain Sea and the Ottawa River channels would be the most likely areas to find evidence of Palaeo-Indian occupation. A number of lithic sites that may date to the Late Palaeo-Indian or Early Archaic period have been reported for the Ottawa area (eg. Swayze 2005; Swayze and McGhee 2011).

During the succeeding Archaic period (c. 7000 to 1000 B.C.), the environment of southern Ontario approached modern conditions and more land became available for occupation as water levels in the glacial lakes dropped (Ellis, Kenyon and Spence 1990:69). In the Ottawa region, the Ottawa and Rideau Rivers, initially much wider bodies of water, receded to their present configuration. Populations continued to follow a mobile hunter-gatherer subsistence strategy, although there appears to have been a greater reliance on fishing and gathered food (e.g. plants and nuts) and more diversity between regional groups. The tool kit also became increasingly diversified, reflecting an adaptation to environmental conditions similar to those of today. This included the presence of adzes, gouges and other ground stone tools believed to have been used for heavy woodworking activities such as the construction of dug-out canoes, grinding stones for processing nuts and seeds, specialized fishing gear including net sinkers and plummet and a general reduction in the size of projectile points. The

middle and late portions of the Archaic period saw the development of trading networks spanning the Great Lakes, and by 6,000 years ago copper was being mined in the Upper Great Lakes and traded into southern Ontario. There is increasing evidence of ceremonialism and elaborate burial practices and a wide variety of non-utilitarian items such as gorgets, pipes and 'birdstones' were being manufactured. By the end of this period populations had increased substantially over the preceding Palaeo-Indian occupation.

By this time the Ottawa River system had developed and would have served as major transportation corridors for Native peoples. As a result more extensive First Nations settlement of eastern Ontario began during this period, sometime between 5,500 and 4,500 B.C. (Kennedy 1970:61; Ellis, Kenyon and Spence 1990:93). Artifacts from Archaic sites in eastern Ontario suggest a close relationship to the Laurentian Archaic stage peoples of New York State. Laurentian peoples occupied the Canadian biotic province transition zone between the deciduous forests to the south and the boreal forests to the north. The Laurentian Archaic artifact complex contains large, broad bladed, chipped stone and ground slate projectile points, and heavy ground stone tools. This stage is also known for the extensive use of cold-hammered copper tools including "*bevelled spear points, bracelets, pendants, axes, fishhooks, and knives*" (Kennedy 1970:59). The first significant evidence for occupation in the Ottawa Valley appears at this time. Archaic sites have been located at Leamy Lake Park in Gatineau (Laliberté 2000; Laliberté, Eygun and Saint-Germain 1999) and on Allumette and Morrison Islands on the Ottawa River near Pembroke (Clermont, Chapdelaine and Cinq-Mars 2003). Over 1,000 copper artifacts and other exotic materials were recovered from the Allumette Island-1 Site (Kennedy 1966). Burial features excavated on the Allumette Island-1 and Morrison Island-6 sites, dating to the Middle Archaic period, are some of the earliest recorded human burials found in eastern Ontario (Kennedy 1966, 1965, 1964, 1962). Late Archaic sites have also been identified to the west in the Rideau Lakes, and at Jessups Falls and in the Pendleton area along the South Nation River to the east (Watson 1982; Daechsel 1980). A few poorly documented finds of Archaic artifacts have been made within Gloucester Township (Jamieson 1989) and sites at Honey Gables and at the Albion Road and Rideau Road intersection may contain Early Archaic material (Swayze 2004, 2003).

The introduction of ceramics marked the beginning of the Woodland period (c. 1000 B.C. to A.D. 1550). These populations continued to participate in an extensive trade network that, at its zenith circa A.D. 200, spanned much of North America and included the movement of conch shell, fossilized shark teeth, mica, copper and silver. Social structure appears to have become increasingly complex, with some status differentiation evident in burials. It was in the Middle Woodland period (c. 300 B.C. to A.D. 900) that distinctive trends or 'traditions' evolved in different parts of Ontario for the first time, noted by archaeologists through variations in artifacts left behind. The Middle Woodland tradition found in eastern and south-central Ontario has become

known as 'Point Peninsula' (Spence, Pihl and Murphy 1990:157). A greater number of excavated sites from this period has allowed archaeologists to develop a better picture of the seasonal round followed in order to exploit a variety of resources within a home territory. Through the late fall and winter, small groups would occupy an inland 'family' hunting area. In the spring, these dispersed families would congregate at specific lakeshore sites to fish, hunt in the surrounding forest and socialize. This gathering would last through to the late summer when large quantities of food would be stored up for the approaching winter.

Towards the end of the Woodland period (circa A.D. 800) domesticated plants were introduced in areas to the south of the Canadian Shield. Initially only a minor addition to the diet, the cultivation of corn, beans, squash, sunflowers and tobacco gained economic importance for late Woodland peoples. Along with this shift in subsistence, settlements located adjacent to the corn fields began to take on greater permanency as sites with easily tillable farmland became more important. Eventually, semi-permanent and permanent villages were built, many of which were surrounded by palisades, evidence of growing hostilities between neighbouring groups.

The proliferation of sites suggests an increase in the population of eastern Ontario, although the Ottawa area has yet to yield as many as other parts of south-eastern Ontario. Significant Middle Woodland components have been found at the Leamy Lake sites (Laliberté 2000) and at a site in Vincent Massey Park which also contained Late Archaic material (Fisher Archaeological Consulting 2012). Fragments of an early ceramic vessel were recovered from the Deep River Site (CaGi-1) on the Quebec side of the Ottawa River across from Chalk River (Mitchell 1963). The Meath Sites (BkGg 1-10), located on Mud Lake in the Muskrat River Basin south of Pembroke, have yielded a range of occupations from the Archaic through to the Middle Woodland (Robertson and Croft 1975, 1974, 1973, 1971; Croft 1986). The Wilbur Lake sites on the Bonnechere River near Eganville are centered around the Kant Site (BjGg-1), which is primarily related to aspects of the Middle Woodland cultural period, although they also contain elements spanning the Late Archaic to Late Woodland periods (Mitchell 1990, 1989, 1988, 1987; Pendergast 1957). Middle Woodland sites have been noted in the South Nation Drainage Basin and along the Ottawa River including the northwest part of Ottawa at Marshall's and Sawdust Bays (Daechsel 1981, 1980). Late Woodland sites have been recorded throughout the Ottawa Valley. Of particular note is an ossuary burial identified in Ottawa in 1843 (Van Cortlandt 1853) which hints at a more permanent occupation of the area. Although ossuaries are a burial practice normally associated with Iroquoian speaking populations, especially the Huron, this interment may have been Algonquin.

Three pre-Contact stage tribal groups occupied eastern Ontario in the final decades prior to the arrival of Europeans. Agricultural villages, dating to A.D. 1400, of an

Iroquoian people referred to as 'proto-Huron' have been found in southern Hastings and Frontenac Counties (Pendergast 1972). By A.D. 1500, however, the easternmost settlements of the Huron were located between Balsam Lake and Lake Simcoe. St. Lawrence Iroquois occupied the upper St. Lawrence River valley. Finally, various Algonquin groups occupied the Ottawa Valley (Day and Trigger 1978:793).

The material culture and settlement patterns of the fourteenth and fifteenth century Iroquoian sites found in the Prescott area of Ontario are directly related to the Iroquoian-speaking groups that Jacques Cartier and his crew encountered in 1535 at Stadacona (Quebec City) and Hochelaga (Montreal Island) (Jamieson 1990:386). Following Cartier's initial voyages, subsequent journeys by Europeans found only abandoned settlements along the St. Lawrence River. At this time, there was a significant increase of St. Lawrence Iroquoian ceramic vessel types on Huron sites, and segments of the St. Lawrence Iroquois population may have relocated to the north and west either as captives or refugees (J. Wright 1966:70-71; Sutton 1990:54). The tumultuous events of the late sixteenth and early seventeenth centuries were certainly in part a result of the disruption of traditional trade and exchange patterns among all First Nation peoples brought about by the arrival of the French, Dutch and British along the Atlantic seaboard.

3.1.3 Post-Contact Cultural Overview

Samuel de Champlain is credited with being the first European to document his explorations of eastern Ontario, travelling up the Ottawa River and exploring some of its tributaries in 1613 and again in 1615. He was preceded, however, by two of his emissaries, Etienne Brule around 1610, and Nicholas de Vignau in 1611. These French explorers encountered groups of people speaking different dialects of the Algonquin language throughout this region, including the Matouweskariini along the Madawaska River to the west, the Kichespini at Morrison Island, the Otaguottouemin along the Ottawa River northwest of Morrison Island, the Onontchataronon in the Gananoque River basin to the southwest, and the Weskarini in the Petite Nation River basin to the north (Pendergast 1999; Trigger 1976). These loosely aligned bands subsisted by hunting, fishing and gathering, and undertook limited horticulture.

Since at least the late sixteenth century, all of these Algonquin peoples were at war with the Mohawk Iroquois, the easternmost Five Nations Iroquois group, over control of the St. Lawrence River trade. While prolonged occupation of the region may have been avoided as a result of hostilities with Iroquoian speaking populations to the south, at least the northern reaches of the South Nation River basin were undoubtedly used as hunting territories by the Algonquin at this time.

The endemic warfare of the age and severe smallpox epidemics in 1623/1624 and again between 1634 and 1640 brought about drastic population decline among all First Nation peoples (Hessel 1993:63-65). Between 1640 and 1650, French unwillingness to provide direct military support against their natural enemy, the Mohawk, led to the defeat and dispersal of the Algonquin and Huron by the Five Nation Iroquois of New York State (Trigger 1976:610, 637-638). Survivors of the various groups often coalesced in settlements to the north and west of the Ottawa Valley, and at the French posts of Montreal, Sillery and Trois Rivières.

In the wake of Champlain's travels, the Ottawa River (also known as the Grand River) became the principal route to the interior for explorers, missionaries, and fur traders. Throughout the seventeenth and eighteenth centuries this route remained an important link in the French fur trade. The recovery of European trade goods (i.e. iron axes, copper kettle pieces and glass beads) from Native sites throughout the Ottawa River drainage basin provides evidence of the extent of contact between Natives and the fur traders during this period. Since the fur trade in New France was Montreal-based, Ottawa River navigation routes were of strategic importance in the movement of trade goods inland and furs down to Montreal. In 1630, Mattawa House, a Hudson's Bay Company post that would become an important centre of the fur trading and lumber businesses, was established on the Ottawa River (Morrison 2005:215). The English continued to use the Ottawa River as an important transportation corridor after they took possession of New France following the end of the Seven Years War in 1763. Although a seigneurie had been established to the east of the study area at L'Orignal by the French in 1674 and granted to Nathaniel Hazard Treadwell, there was little permanent European settlement in the Ottawa region at this early date.

Nepean Township and the Bayview Area

The need for land on which to settle refugees of the American Revolution led the British government into hasty negotiations with their military allies, the Mississauga, who were assumed, erroneously, to be the only Native peoples inhabiting eastern Ontario.¹ Captain William Redford Crawford, who enjoyed the trust of the Mississauga chiefs living in the Bay of Quinte region, negotiated on behalf of the British government. In the so-called 'Crawford Purchase' of 1783, the Mississauga were cajoled into giving up Native title to most of eastern Ontario, including what would become the counties of Stormont, Dundas, Glengarry, Prescott, Russell, Leeds, Grenville and Prince Edward, as well as the front townships of Frontenac, Lennox, Addington and Hastings and much of what is now the City of Ottawa (Lockwood 1996:24). Settlement along the north bank of both the St. Lawrence River and the eastern end of Lake Ontario began in earnest

¹ At this time, there was a significant Algonquin presence in eastern Ontario and Mohawk Reserves had been established at Tyendinaga near Deseronto and at St. Regis near Cornwall.

about this time. Land from the Cataraqui River west to the Bay of Quinte was laid out in townships to be settled by some of the more than ten thousand United Empire Loyalists from Vermont, Connecticut and New York who had gathered throughout Lower Canada awaiting supplies and transport to what was to become Upper Canada.

By the late 1780s the waterfront townships were full and more land was required to meet both an increase in the size of grants² to all Loyalists and grant obligations to the children of Loyalists who were then entitled to 200 acres in their own right upon reaching the age of 21 or in the case of daughters, being married. Furthermore, in 1792 John Graves Simcoe offered free grants of land to anyone who would swear loyalty to the King, a policy aimed at attracting more American settlers. As the government also dictated the setting aside of one-seventh of all the land for the Protestant Clergy and another one-seventh as Crown reserves, pressure mounted to open up more of the interior. As a result, between 1790 and 1800 most of the remainder of the Crawford Purchase was divided into townships (Lockwood 1994:30).

Settlement in the Ottawa area was thus not actively encouraged by the colonial government until the late eighteenth century. To this end, in 1793, two years after the division of the Province of Québec into Upper and Lower Canada, Deputy Surveyor John Stegmann was asked to undertake an initial survey of four townships (Gloucester, North Gower, Osgoode and Nepean) on both sides of the Rideau River near its junction with the Ottawa River.

At the beginning of the nineteenth century there had been an economic shift from the fur trade to the lumber industry as the Napoleonic blockades increased Europe's demand for quality pine. Settlement followed, and a large number of farms and lumber camps began to appear in the area. A mutually beneficial relationship soon developed between the lumber and farming industries: the former depended on the local farmers to supply food stuffs to shanties and lumber camps and the latter depended on the lumber industry for seasonal work in the winter (Mercer 1998:5). Philemon Wright, who had established a settlement at Hull on the north shore of the Ottawa River at the Chaudière Falls with five families and 33 men in 1800, is commonly acknowledged as the first permanent European resident in the Ottawa area (Bond 1984:24). Wright was drawn to the region by the rich timber resources along the Ottawa River and the immense water power provided by the falls. This community grew over the next few years and by 1805 Wright had established a significant lumber business, an industry that would continue to dominate the local economy through the nineteenth century. It

² Civilians now received 200 acres instead of 100 acres, with an additional 200 acres for each of their children. The size of grants for military veterans increased with rank with privates receiving 200 acres at the low end and, at the high end, field officers being granted 5,000 acres with an additional 200 acres for each member of their family. In 1784 a field officer had only received 1,000 acres and an additional 50 acres per family member (Lockwood 1994: 30-32).

would take several more years for permanent settlement to spread to the south side of the Ottawa River.

Land registry records indicate patents for lots in Nepean were issued as early as 1802, and by the time the township was re-surveyed by John McNaughton in 1823, most of the lots had been granted. The early grants were not, however, an accurate reflection of the level of settlement as many were made to absentee land owners who did not develop their properties. The first permanent settler in the township was Ira Honeywell, who arrived on Lot 26, Concession 1, in the Ottawa Front of Nepean Township in 1811. Over the next few years, others slowly began to settle the Ottawa and Rideau Front lots of the township. Tracing this early settlement is often complicated by the presence of squatters on land legally owned by land speculators and non-resident Loyalists. This is clearly the case with the Bayview area and the adjacent LeBreton Flats.

The location first enters the historical record in 1818 with the arrival of soldier-settlers of the 99th Regiment destined for the newly established military settlement of Richmond. Having traveled up the Ottawa River from the St. Lawrence, they disembarked at a site on the south side of the river just below the Chaudière Falls, known as Bellows' Landing (later referred to as Richmond Landing). They camped at the landing and on the adjacent 'flats' through the fall and early winter while cutting a road from the landing to the planned town site. The so-called Richmond Road was the first formal road in Carleton County and one of the earliest in Upper Canada (Walker & Walker 1968:21-22).

Richmond Landing, which became the nucleus for the initial settlement on the south side of the Chaudière Falls, lay within Lot 40, Concession A, Ottawa Front, the Crown patent for which was issued to Robert Randall in 1809. According to Walker and Walker (1968:54), however, there were four occupants at the landing at the time of the arrival of the soldiers of the 99th Regiment: Caleb Bellows who operated a store, Jehiel Collins who worked as a clerk for Bellows, as well as Andrew Berry and Isaac Firth who, by 1819, were operating a tavern on LeBreton Flats (Elliott 1991:81). Shortly thereafter, log buildings were erected nearby to serve as government stores. In the early years of the settlement of this area, Richmond Landing continued to serve as a depot for both people and goods being transported to the interior settlements at Richmond and in March Township. Over the following decades the settlement on Richmond Landing continued to grow, as is shown on several early to mid-nineteenth century plans of the area. By 1824, Samuel Stacey and George Bellows had purchased property and opened a store. Between 1824 and 1828, a former soldier, Charles Hollister, was operating an inn known as the 'Hospitable House Keeper' at the landing, and Stephen Collins was also running a store. In 1828, Collins' son Jehiel took over the

latter property and converted it to an inn (Elliott 1991:82). Firth's tavern continued to operate through this period.

Despite these establishments, there was little recorded settlement in the vicinity through the early decades of the nineteenth century. Part of the adjacent land (Lot 39) had initially been set aside as a Clergy Reserve, and disputes over title to Lot 40 slowed development. An American, Robert Randall had earlier moved to Niagara Falls where he established an iron foundry, and then saw and grist mills, followed by a large mercantile business in Cornwall. An ambitious industrialist, he travelled to the confluence of the Ottawa and Rideau Rivers in 1807 to scout for waterpower sites. The potential of the Chaudière Falls was immediately obvious to him and he petitioned the crown for 950 acres stretching south from the Ottawa River to what is now Carling Avenue between Bayswater and Bronson Avenues. While unable to obtain all of this land, he did receive the patents for two lots (Lots 38 in Concession 1 and 40 in Concession A) and the lease for an adjoining lot (Walker & Walker 1968:81). Before he could develop the property, however, Randall was tried in court for failure to pay debts and was sent to prison for seven years. His lands at the Chaudière were seized and auctioned at a Sheriff's sale in Brockville in 1820. Although the seizure was not without cause, its legality was widely disputed and Randall's mistreatment by members of the Upper Canada elite was a key factor in drawing the reform radical William Lyon Mackenzie into politics (Elliott 1991:82).

Somehow Captain John LeBreton learned of the impending sale. LeBreton, a veteran of the War of 1812, had obtained the patent for Lot 9 in both Concession 1 and Concession A, Ottawa Front, Nepean Township, in 1819. By 1823 he had established a settlement called 'Britannia' where he was residing and had constructed mills (Elliott 1991:14). He would have been well aware of the potential waterpower of the Chaudière Falls, which lay several kilometres east of his land. LeBreton hurried to Brockville for the sale and gained needed financial support from Livius P. Sherwood, a Brockville lawyer and member of a prominent Loyalist family. John LeBreton was successful in purchasing Lot 40 and in December of 1820 the Sheriff's writ for the sale was registered. At the same time, LeBreton's 'sale' of half the lot to Sherwood was recorded in the land registry abstract. The partition of the lot was formalized in 1822, recognizing Sherwood's role in the purchase.

The Governor, Lord Dalhousie, had wanted Lot 40 for government purposes. Dalhousie claimed that LeBreton had been fully aware of this fact when he purchased the property and that he had then offered to sell it to the Crown at a highly inflated price. Although LeBreton's title to the lot was upheld by the courts, there remained a great deal of hostility between Dalhousie (and his representative Lieutenant-Colonel John By) and LeBreton (Elliott 1991:82).

Sherwood and LeBreton immediately registered a plan of subdivision for the 'Town of Sherwood' to be developed at the north end of Lot 40. In response, By reserved Lot 39 for government purposes in order to impede the plan. The animosity of Lord Dalhousie, combined with the construction of the Rideau Canal and the development of Upper and Lower Bytown (established in 1826) further to the east during the 1820s effectively thwarted the establishment of Sherwood, which otherwise would have become the first town site on the south side of the Ottawa River.

Settlement on the LeBreton Flats through the 1820s and 1830s appears to have been largely restricted to the area of Richmond Landing (with the exception of Firth's Tavern), well outside of the present study area. Conflict over the title of Lot 40 continued, with LeBreton and Sherwood attempting to assert their ownership by seeking to eject Firth and his partner, Berry, from the property. At the Perth Assizes of 1828, the court once again upheld the legality of the sale to Sherwood and LeBreton but the matter did not end there. The same session had also ruled that By did not have the authority to seize land for the construction of bridges across the Chaudière, an action he had been attempting. Both issues were 'resolved' with By's purchase of the acre surrounding Firth's tavern, which was conveniently located at the south end of his planned bridge. By reportedly removed one of the old log buildings which William Firth had used as a stable, erected a new inn (for Mrs. Firth) and leased the land back to Firth (Elliott 1991:82).³

By 1832, the Firths had left the Chaudière and moved into Bytown, but the tavern appears to have continued to operate at least until 1853 (Elliott 1991:52, 97). The so-called 'Crown acre' surrounding Firth's tavern was assigned to Daniel McLachlin in 1835. McLachlin obtained permission from the government to build grist and sawmills on the property to serve the local farmers. Erected c. 1837, these were the first mills built in the LeBreton Flats area (Elliott 1991:97).

The original bridge built by Colonel By across the Chaudière collapsed in 1836; in the 1840s a new bridge was constructed and roads were planned to connect the expanding settlement of Upper Bytown with the bridge and the more outlying areas of Nepean Township. When the tender for the bridge was advertised in 1842, LeBreton immediately recognized the possibility of revitalizing his failed town, drew up a new survey plan for his Lot 40 property, and began offering lots for sale (Elliott 1991:96). There were, however, various delays and only a few lots were sold until after the plan of subdivision had been approved in 1844, and formally registered a year later.

³ The new inn building was on land that had been laid out as a street dividing the Sherwood and LeBreton portions of Lot 40 (NAC UC Sundries, RG 5, A1, vol. 64, 33918, reel C-4612).

Lot 39, Concession A, was divided into town lots by government order in 1846, but these were never developed (Elliott 1991:108). The Crown patent for Lot 39 was finally issued to John Rochester and Edward Malloch in 1853. The industrial promise of the Chaudière Falls began to be realized when, starting in 1849, the Province of Canada, acting as an agent for the Crown, purchased the land fronting the Falls. The Province subsequently widely circulated notice of the impending sale of hydraulic lots by public auction, attracting American entrepreneurs and capital to the Ottawa Valley lumber industry. This launched an explosive growth in the lumber industry, with numerous mills constructed at the Chaudière, on the islands and on both shores of the river. The economic opportunities offered by the flourishing timber trade encouraged a further wave of immigration to the area. This in turn created a demand for housing, both for the mill workers and the industrialists who owned the mills.

During the late 1840s and early 1850s, scattered squatters' buildings began to appear on the former clergy reserve making up the western portion of LeBreton Flats (Lot 39), in contrast to the subdivided lands within Lot 40 which followed the street grid of LeBreton's proposed subdivision, with development well-underway. This period saw the emergence of the mixed residential, commercial, and industrial community that came to characterize the LeBreton Flats throughout the remainder of the nineteenth century and first half of the twentieth century. Residences included a mix of the working class homes of mill labourers, as well as the larger estates of mill owners and other prominent citizens of early Bytown.

Bytown remained part of Nepean Township until 1850, as its military founders were reluctant to relinquish control of the town (Elliott 1991:81). Five years later, it was incorporated as the City of Ottawa. In 1857 Queen Victoria chose Ottawa to be the capital of the Province of Canada (modern Quebec and Ontario). This choice had been suggested by the Queen's advisors for several reasons: Ottawa was the only settlement of significance located on the border between Canada East and Canada West and would likely be an acceptable choice to the French and English populations, it was located far from the American border and would be less vulnerable to attack than the other major Canadian cities of the time, and the government already owned a large parcel of land over-looking the Ottawa River. In addition, Ottawa was situated roughly half-way between Toronto and Quebec City and, given the presence of the Ottawa River and Rideau Canal, could be supplied by water from either Kingston or Montreal.

Rapid expansion of the lumber mills during the 1860s and 1870s stimulated continued development of the Chaudière district, leading to further industrialisation and urbanization. Development related to industrial and commercial enterprises occurred simultaneously with the construction of private residences, including the modest stone houses of entrepreneurs and the hundreds of rough-cast wooden dwellings of the new industrial labour force (Taylor 1986:64). The sawing that took place at the Chaudière

became central to the economy of the whole region, with the Ottawa River timber trade spurring the growth of the city, bringing an influx of immigrants and entrepreneurs hoping to profit from the export of sawn lumber.

As the immediate area on LeBreton Flats became developed, new subdivisions began to be created on surrounding lots within walking distance of the mills. One of the first was Rochesterville on Lot 39, Concession 1. The Rochester family had ten park lots surveyed in 1857 along Richmond Road with 105 building lots on four roads to the rear, though development was slow until the late 1860s when many of the surveyed lots were auctioned off; four new blocks in Rochesterville were surveyed and opened for settlement in 1870. Part of the adjacent Sparks Estate on Lot 38 was subdivided as Bayswater in 1875. Mechanicsville to the north had been registered earlier in 1872 (Elliott 1991:105-122).

Growth in the area was further stimulated by the construction of railway connections to the Chaudière, spurred by the needs of the sawmills, which required more efficient transport for their ever-increasing output. The Canada Central Railway was opened to Broad Street on LeBreton Flats in 1870, with the competing St. Lawrence & Ottawa Railway completing a branch line to Broad Street via Dow's Lake the following year. Both railways constructed passenger stations, freight terminals and engine houses in the vicinity. These were followed by the Québec, Montreal, Ottawa and Occidental Railway from the Quebec side of the river, which had completed a line including the Prince of Wales bridge in 1880, and the rival Canada Atlantic Railway championed by lumber magnate J.R. Booth in 1883, both also terminating at Broad Street. All but the Canada Atlantic had been amalgamated into the Canadian Pacific Railway (CPR) by 1884. The Canada Atlantic was taken over by the Grand Trunk Railway in 1904, and then in turn by Canadian National Railways in 1923 (Churcher n.d.b).

Also relevant to the present study was the introduction of electric streetcars to the City of Ottawa. In the early 1890s, two local entrepreneurs, Thomas Ahern and Warren Soper, received a contract to build an electric street railway in the capital. The Ottawa Electric Railway Company, formed by Ahern and Soper, installed streetcar tracks throughout the core of the city, including a line that ran along Wellington and Albert Streets.

On April 26, 1900, a large portion of Ottawa and Hull were destroyed by a devastating fire. The Great Fire, as it has come to be known, had its origins in a small chimney fire in Hull, which broke out about 10 am. The fire blazed out of control and by noon had consumed about two thirds of downtown Hull. Embers borne by strong northerly winds ignited lumber yards on the Ontario shore. The fire swept through the industrial area in the LeBreton Flats and advanced to the south through Rochesterville as far as Dow's Lake. A fire break created by the railway cut of the CPR saved the village of

Hintonburg to the west, while the eastward advance of the fire was partially stayed by three companies of militia acting as a 'bucket brigade.' The fire left the Chaudière, LeBreton Flats, Rochesterville and Sherwood south to Dow's Lake in smouldering ruins, having burned a swath nearly half a mile wide, covering more than 70 city blocks (Bond 1984:89). The fire has the distinction of being one of the worst in Canadian history, with property damage estimated at well over ten million dollars. Railway infrastructure and property were severely damaged, leading to reorganizing of the various yards and the shifting of the main Canadian Pacific passenger station further to the south away from the lumber mills.

The importance of the waterpower for industrial production and the need for housing meant that reconstruction began almost immediately. The new communities that developed were working class neighbourhoods of row housing and small homes mixed with commercial businesses (including wholesale and retail lumber operations, grocers and other stores) and industrial establishments (including sawmills, pulp mills, primary metal and fabricated metal industries such as foundries, boiler works, and machine shops, as well as breweries). In addition, junk yards, waste materials warehouses, metal scrap yards, service stations and automobile wreckers became a major presence in the area in the early decades of the twentieth century (Raven Beck Environmental Ltd. 1991:17). The railway and lumber yards west of Broad Street were also quickly brought back into use. In an effort to increase the city tax base given that the existing and newly rebuilt and thriving suburbs were mostly still in Nepean Township, the neighbouring subdivisions began to be annexed by Ottawa: Rochesterville earlier in 1889, Bayswater and Hintonburg in 1907, and Mechanicsville in 1911 (Elliott 1991:xiv).

As the lumber and milling industry waned, the Chaudière district became more diverse in terms of employment. By the 1940s, it was home to a broad cross-section of residents, though mostly unskilled and semi-skilled labourers: "*as the old lumber town became a more modern city, LeBreton Flats remained a mixed-use, working-class, low-income neighbourhood*" (Picton 2009:23). The surrounding area had always had a significant francophone population, but the low rents and affordable housing of the area attracted new immigrants to Ottawa following the post-World War II period (Picton 2009:25). Taverns, light manufacturing, craft production and foundries were interspersed with single family dwellings, doubles, duplexes, triples, apartments, commercial buildings, institutional structures, retail, and warehousing (Picton 2009:26).

By the 1950s and 1960s, the district, particularly the LeBreton Flats, came to be seen as a slum by city planners. In April of 1962, residents north of Primrose Avenue were sent letters notifying them that the National Capital Commission (formed in 1959) had expropriated their property. Although redevelopment of the area had been considered in previous federal planning exercises (e.g. Todd Holt, etc.), the impetus for the expropriation came from a plan prepared by famous French architect and town planner

Jacques Gréber (the plan, titled *General Report on the Plan for the National Capital 1946–1950* is commonly referred to as the ‘Gréber Plan’). The Gréber Plan advocated for a coordinated program of improvements to the capital, including removing the railways from central Ottawa. By the end of the 1960s, the LeBreton Flats, selected areas in Rochesterville and almost all the railway infrastructure in the area had been completely razed, representing one of Ottawa’s largest urban renewal projects.

Following the levelling of the buildings, problems stemming from the need to coordinate planning between multiple levels of government thwarted planned re-development. The area sat largely vacant for decades, though a number of developments of relevance to the present study took place. These included the removal of the CPR tracks in the late 1960s, the landfilling of Nepean Bay to enlarge the shoreline in advance of the construction of the Ottawa River Parkway (proposed as part of the Gréber Plan) which was completed c. 1967 and the construction of the OC Transpo Transitway c. 1983 (www.octranspo1.com).

At present, while some re-development has begun in the adjacent LeBreton Flats, including the construction of east-west running light rail transit, apart from the O-Train line and Bayview Station the study area remains vacant. Aerial photographs consulted during the preparation of this report show that portions of the study area have been used intermittently as parking lots and snow dumping grounds. In addition, the Champagne multi-use path has recently been installed on the east side of the O-Train line, connecting with the bike path system along Albert Street.

3.1.4 Property History

The following detailed review of archival research was conducted in order to develop a general picture of the land-use history of the study area through the nineteenth and twentieth centuries. This discussion is based on a review of nineteenth and twentieth century maps (with particular emphasis on fire insurance plans produced between 1878 and 1956), land registry abstract index records, City of Ottawa directory listings and aerial photographs.

The study area lies within a portion of Lot 38, Concession 1, Ottawa Front, Nepean Township. This lot extends south from the Albert Street right-of-way to Carling Avenue, from Bayswater Avenue along its western edge to a line through an existing subdivision west of Preston Street, though the study area consists of only a small section along the extreme northern edge.

The Crown patent for Lot 38 was awarded to Robert Randall in 1809. Just as with Lot 40, however, he seems to have lost control of it during his incarceration, with receipt of the property by Livius Sherwood (partner to John LeBreton in the Lot 40, Concession A

purchase) acknowledged in a land registry instrument dated 1833 (Carleton County Land Registry Office or CCLRO Instrument RO691). Lot 38 appears to have remained undeveloped through the mid-nineteenth century, passing intact to Peter Aylen Vallaly in 1834, but sold following the financial crisis in 1837 to his creditors William Price & Co., who in turn sold it to Nicholas Sparks in 1843 (CCLRO Instruments RO1172, RO1193 and RO2262). Sparks leased the property along with an additional 150 acres along Richmond Road to John Clark jr. in 1857 for dairy farming, initially for seven years but this appears to have been renewed. The lease was passed to his son Edmund Wood Clark in the 1870s, who was still using at least part of Lot 38 for pasture until 1885 – in 1881 he still occupied 150 acres, even though the lot had been formally subdivided six years earlier (Elliott 1990:123,151). Lot 38 remained part of the Sparks Estate after the death of Nicholas Senior in 1861, passing to his children and/or their spouses (CCLRO Instrument RO18859). It does not appear that any structures apart from the Richmond Road had been erected within the study area prior to this time, though some of the early maps show a creek running through the property (see, for example, Map 4).

The Walling plan of 1863 shows two residences on Lot 38, though the division between Concession A and Concession 1 appears to be inaccurate, with Richmond Road on the former instead of the latter (Map 5). One of the residences lay to the south of Richmond Road; the other was in the vicinity of the Edward Malloch house on Lot 39, Concession A, which is offset, overlapping Lot 38 in this area. Thus neither structure appears to have been within the study area.

Nicholas Sparks jr. agreed to sell a portion of Lot 38 to the St. Lawrence & Ottawa Railway for a line to the Chaudière district in 1870 for \$11,558, which included all of the current study area. The single track was completed and opened in 1871, terminating at a station on Lebreton Flats near Broad Street. The railway company infrastructure also included a freight warehouse near the station and an engine house at the end of a short spur line within the study area, as shown on a map dating to 1872 (Map 6). The section of the Sparks Estate surrounding the study area was formally subdivided in 1875, the plan showing the single St. Lawrence & Ottawa track with the study area marked as being owned by the railway company. The purchase of the St. Lawrence & Ottawa corridor as well as that of additional land does not appear to have been finalized until 1883, when the additional land was conveyed to the St. Lawrence & Ottawa Railway by Esther Slater, one of the daughters of Nicholas Sparks sr. Payment for the additional land was undertaken by the Canadian Pacific Railway Co. which had assumed control of the St. Lawrence & Ottawa in 1881, eventually leasing it for 999 years in 1884 (CCLRO Instrument NP9452; Churcher n.d.b).

The 1879 Belden plan of Bayswater depicts the St. Lawrence & Ottawa engine house, a large rectangular building at the end of a short spur line from the St. Lawrence &

Ottawa Railway Chaudière branch line on the four acre triangle between Richmond Road and the road allowance between Concession A and Concession 1 of the Ottawa Front (Map 7). A turntable is also illustrated on the line leading into the east end of the structure. This structure was likely erected as early as 1871, as a newspaper article indicates that the “*contract for building the Chaudiere engine house has been given to Mr. Palen*” (*Ottawa Free Press*, October 16th, 1871). The Canada Central Railway line is also shown on the Belden plan to the north of the road allowance. The former creek across the study area is clearly illustrated, crossed by both railway lines before they entered Lot 39, Concession A. Some of the Bayswater blocks had been subdivided into building lots, particularly on the part of Lot 38 to the east of the St. Lawrence & Ottawa line.

The 1885 fire insurance plan of the Bayview area depicts a large wood and brick veneer twenty-stall engine roundhouse just to the northwest of Richmond Road, to the southwest of the existing St. Lawrence & Ottawa rail line which had split just southeast of the property, curving northwards towards LeBreton Flats and westwards towards the Prince of Wales Bridge (Map 8). A turntable is illustrated to the north of the semi-circular engine stalls with a small one-and-one-half storey outbuilding to the northeast, perhaps a powerhouse for the turntable. This roundhouse had been constructed by the Canadian Pacific Railway⁴ in 1883, already begun by August and opening in December, replacing both the much smaller engine house erected by the Canada Central Railway closer to LeBreton Flats which had burned in October, as well as the St. Lawrence & Ottawa structure within the study area depicted on the Belden map (Image 1).

A wooden one-and-one-half-storey structure is also depicted within the study area, fronting on Richmond Road between the two arcs of the railway line, with a small shed to the rear. According to city directories, this was a residence occupied by Jean Lechance, alternately described as a train hand or section man, from 1888 (the earliest date the residence is pinpointed) until at least 1896; after 1900 it had become the locomotive foreman’s office, but had been removed by 1912 (Ottawa city directories 1888-1912). Though one recent environmental assessment report, for which former CPR employees had been interviewed, indicates that the building had instead been used as an oil house or for oil storage, which appears to be corroborated by environmental testing, its location fronting on the former road rather than as rail siding suggests otherwise, that it had indeed been constructed as a residence (Franz Environmental Inc. 2001:9 and Figure 1.2). Further towards the northeastern end of the study area, closer to the bend in Richmond Road, was a two storey warehouse used for coal oil storage with a heating boiler to the southeast. From 1889 to 1898 this was owned by the Petrolia Oil Company, succeeded in 1899 by the Queen City Oil Company. The warehouse was destroyed in the Great Fire of 1900 (Ottawa city directories 1889-1901).

⁴ By this time the Canadian Pacific Railway had assumed control of both the St. Lawrence & Ottawa Railway and the Canada Central Railway.

The 1885 fire insurance plan shows that the extreme northeastern tip of the study area was being used, probably illegally, for lumber piling as part of J.R. Booth's Canada Atlantic Yard on Lot 39, Concession A. The Richmond Road toll house lay within the road right-of-way in this location. A second railway company, the Canada Atlantic, had constructed a line across the northeast end of the study area to the Chaudière in 1883, carried over the study area and Richmond Road through the Canada Atlantic Yard on an elevated trestle.

By 1888 the outbuilding next to the turntable had been removed, but two small one-and-one-half-storey outbuildings with one-storey additions had been erected to either side of a siding to the north of the residence adjacent to Richmond Road (Map 9). On this fire insurance plan the brick veneer is illustrated, and an additional short siding had been added leading west from the turntable.

The 1898 fire insurance plan shows only minor changes to the study area (Map 10). The small sheds on either side of the siding had been altered slightly, perhaps having been replaced as both are only depicted as having one storey. A coal elevator had been added to the northwest of the sheds next to another siding.

The roundhouse survived the Great Fire of 1900, but nevertheless the rail yard had been reorganized by 1901 (Maps 11 and 12). The one-and-one-half-storey wooden residence next to Richmond Road had also survived, now used as an office, but all of the other railway outbuildings had been removed, perhaps burned in the fire. New one- and two-storey coal bins had been added along the siding leading to the roundhouse, and the area to the northeast of the branch line leading to the LeBreton Flats converted into pens for housing cattle, including a long one storey shed. The toll house remained within the Richmond Road right-of-way.

Several fires occurred in the roundhouse throughout its use, including a large fire in the central and eastern part of the building in 1905, smaller fires in the fall of 1909 and early in 1910, and another larger more devastating fire in April of 1910. This destroyed the eastern half of the building and badly damaged four engines - the western part was only preserved because of a firewall that had been erected between the two halves of the building (*Ottawa Citizen* April 12 1910; *The Ottawa Evening Journal* April 12, 1910). Though the roundhouse appears to have been repaired for continued use through the remainder of the year, a new reinforced concrete roundhouse had been completed slightly to the west in the location of the current Tom Brown Arena by the end of 1911.

Though the Canadian Pacific and Canada Atlantic railway crossings on Wellington Street were gated, there were often problems with horse teams getting caught between the gates; thus to improve safety the Board of Railway Commissioners determined to have Wellington Street carried over the rail lines on a viaduct. The steel central section

was to be approximately 160 m in length, held up by steel beams and concrete pedestals and abutments (Images 2 to 4). This section was erected by the Canadian Pacific Railway. The approaches, constructed by the City of Ottawa and consisting of earth-filled masonry retaining walls, were each almost 20 m in length. The roadway was just over 9 m wide and had a pedestrian sidewalk on the south side. The viaduct was opened to traffic at the end of 1909 (*The Contract Record* 1910, Vol. 24, No. 1:37).

By 1912 the study area was mostly empty, apart from the main CPR lines, some extended sidings and the cattle pens, though the Wellington Street viaduct was in place (Map 13). The Grand Trunk Railway Company, which had absorbed the Canada Atlantic Railway in 1904, was planning to shift its line to the LeBreton Flats further to the west to extend it below the viaduct alongside the Canadian Pacific Railway line. The 1883 roundhouse and the residence/office next to Richmond Road had been removed.

More structures had been erected within the study area by 1925, more clearly visible in a series of aerial photographs taken in 1928 and thereafter, and illustrated on a 1925 revised to 1948 fire insurance plan (Images 5 and 6; Map 14). These included additional sidings to the new roundhouse to the southwest and within the railway yard between Wellington Street and the river, a large concrete and wood ice house with a small outbuilding near the centre of the study area, smaller wooden buildings to the west of the ice house including a one-storey office, a one-and-one-half-storey office/storage building, a one-storey oil house and a one-storey shanty, with more formalized cattle pens toward the northeast end of the study area (Images 7 to 9). A coal dispenser lay just beyond the southwestern edge of the property (see Image 7). Apart from a few minor variations, all of these structures appear to have remained on the property through 1956 and into the early 1960s (Images 10 to 11; Map 15).

The railway structures in the study area had been abandoned by October of 1967 with the shifting of the main rail corridor to the fringes of the city; by April of the following year all of the buildings had been removed (Churcher n.d.b). Most of the sidings were torn up, eventually leaving just a single CPR line through the study area providing access to the Prince of Wales bridge. The surrounding land was expropriated by the NCC. The demolition of the Wellington Street viaduct followed in 1967, as it was felt that it could no longer support heavy loads (*Ottawa Citizen* October 1966; *Ottawa Journal* February 28, 1967), replaced with a new bridge further to the north linking Wellington and Scott Streets, roughly along the right-of-way between Concession A and Concession 1. Part of the redevelopment included the construction of regional trunk collector storm sewer and other utility lines through the study area (Image 12). The location of the 1911 roundhouse was extensively graded with added fill for the construction of the Tom Brown arena beginning in 1977.

The last train crossed the Prince of Wales Bridge in 2001; rail access to the bridge from the Ontario side was removed in 2010. The remaining CPR track through the study area, which had been upgraded to run the O-Train on the line since 2001, was sold to the City of Ottawa in 2004. The City formed Capital Railway to operate the train the following year, with Bayview Station being the current northern terminus (Churcher n.d.b).

3.2 Archaeological Context

This section of the report describes the environmental and archaeological context of the study area which, combined with the historical context outlined above, provides the necessary information to assess the archaeological potential of the property.

3.2.1 Previous Archaeological Research

In order to determine whether any previous archaeological fieldwork has been conducted within or in the immediate vicinity of the present study area, a search of the titles of reports in the Public Register of Archaeological Reports maintained by the Ministry of Tourism, Culture and Sport (MTCS) was undertaken. In addition, in order to augment these results, a search of the Past Recovery corporate library was conducted and a network of professional contacts was consulted, including other licensed archaeologists working in the area.⁵

Previous Archaeological Research in the Ottawa Area

Archaeological work in the region until recently has been limited; however the reports of several naturalists and avocational archaeologists working and writing in the nineteenth and early twentieth centuries reveal that a number of archaeological sites were located along this stretch of the Ottawa River, on both the north and south banks above and below the Chaudière Falls, representing occupations stretching back as far as the Late Archaic. A brief discussion of some of the relevant findings of published accounts of this work is included below.

At least one of these sites is of particular interest to archaeological assessments in the vicinity. In 1843, human bones were found while excavating sand for the construction of the Union Bridge across the Chaudière. This Native ossuary was excavated by

⁵ In compiling the results, it should be noted that archaeological fieldwork conducted for research purposes should be distinguished from systematic property surveys conducted during archaeological assessments associated with land use development planning (generally after the introduction of the *Ontario Heritage Act* in 1974 and the *Environmental Assessment Act* in 1975), in that only those studies undertaken to current industry standards can be considered to have adequately assessed properties for the presence of archaeological sites with cultural heritage value or interest. In addition, it should be noted that the vast majority of the research work undertaken in the area has been focussed on the identification of Aboriginal sites, while current MTCS requirements minimally require the evaluation of the material remains of occupations and or land uses pre-dating 1900.

Edward Van Cortlandt, the Bytown physician who later purchased land in LeBreton Flats. Unfortunately, there is no surviving map showing the location of the excavation, but Van Courtlandt described the site as:

...situated on a projecting point of land directly in rear of their encampment, at a carrying place, and about half a mile below the mighty cataract of the Chaudiere; it at once demonstrates a fact handed down to us by tradition, that the aboriginies were in the habit, when they could, of burying their dead near running waters (Van Courtlandt 1853:161).

Although later writers have placed the site at the northwest corner of Wellington and Bay Streets (eg. Sowter 1909:98-100, 1915:50-52, 1917:84-85; Brault 1946:38; Jamieson 1989:6), Van Courtlandt's description appears to indicate Richmond Landing. The discovery of an anonymously penned article in a contemporary newspaper pointed to Bedard's Landing (now part of the grounds of the Canadian Museum of History or CMH) as the site of the ossuary (Boswell 2002a, 2002b, 2002c). The most recent published research on the location, however, which includes a detailed comparison of the anonymous contemporary newspaper account of the excavation with Van Cortlandt's published version confirmed that the Bedard's Landing account should be treated as likely the most accurate (Pilon 2003), although the exact location of the ossuary is still debatable. The current location of the human remains and associated funerary artifacts that were excavated is unknown. Given the limited information on the site from Van Cortlandt's brief description, it is not possible to assign the ossuary to a specific time period(s) or a particular cultural group(s).

In the late nineteenth and early twentieth centuries, T.W.E. Sowter undertook a number of archaeological investigations in the Ottawa area. He identified several sites at Lac Deschenes and noted Native artifacts along the shoreline at the Chaudière (Sowter 1895, 1900, 1909:65; 1915:47) and along Brewery Creek,⁶ where he reports that an old portage around the north side of the Chaudière rapids was located (1909:93), as well as further down the Ottawa River at Bedard's Landing (1909:94). In 1917, a map compiled by Sowter of known archaeological sites in the vicinity of Lake Deschenes was published (1917:84). The maps shows a site in the general vicinity of LeBreton Flats, and an index to the map lists the site as "[o]ssuary on site of Capital Brewery, corner of Wellington and Bay Streets" (1917:85).⁷

In the early 1900s, William. J. Wintemberg, then with the Victoria Memorial Museum,⁸ began to research the prehistory of the Ottawa region by compiling meticulous records

⁶ Previously named Brigham's Creek.

⁷ This would appear to be a reference to Van Cortlandt's ossuary, though, as mentioned above, likely in the wrong location.

⁸ Now the Canadian Museum of History.

of artifacts and site references in the National Museum collections consisting mainly of artifacts donated by the Ottawa Literary and Scientific Society in 1884, the Ontario Provincial Museum⁹ and the Redpath Museum at McGill (Jamieson 1999:20). He also questioned local farmers and collectors, and combed through published references. Although much of this research was never published, some of his notes on artifacts and sites found in Carleton County can be found in the archives of the CMC (Wintemberg n.d.), and in an article published in 1929 (Wintemberg 1931).

Between 1940 and the 1990s, several researchers conducted archaeological investigations within the Ottawa region, including Douglas Leechman of the National Museum of Man⁸ in the Pontiac Bay area in the 1940s (Leechman n.d.), Clyde C. Kennedy from the early 1950s until the late 1980s on several sites in the Upper Ottawa Valley including Laurentian Archaic sites on Morrison and Allumette Islands (Kennedy 1965, 1966; Chapdelaine and Clermont 1998), and James Pendergast is known to have conducted investigations on several sites in the region. Much of the work carried out by these researchers consisted of preliminary investigations that were not followed by substantial investigations, and there are few publications detailing their findings. Later projects of note include investigations conducted on several Middle Woodland period sites in Constance Bay by Gordon Watson (1972) and on Lac Des Chats (named the Sawdust Bay sites) by Hugh Daechsel (1981).

Jamieson (1989) provided an inventory of pre-Contact sites in the Ottawa region that attempted to collate the often poorly reported nineteenth and early twentieth century discoveries. The inventory lists the ossuary discovered by Van Courtlandt (Site #8) as having been situated at the northwest corner of Wellington and Bay Streets (Jamieson 1989:6), which, as mentioned above, is the location ascribed to the site by convention although it does not match Van Cortlandt's published description very well. In addition, the inventory includes a reference to a stone pipe bowl (Site #7) having been found 100 feet north of Wellington Street, and 750 feet west of Bank Street, which would place the find to somewhere on the front lawn of the Supreme Court of Canada (depending on how one chooses to interpret the use of north, either magnetic or by relation to the street grid). Accession numbers listed with this artifact indicate that it is in the collection of the CMH.

More recently, Jean-Luc Pilon (2008, 2006, 2005), curator of Ontario Archaeology with the CMH, has identified two pre-Contact sites along the portion of Rockcliffe Park fronting on the Ottawa River, one in Governor Bay (BiFw-92: Rockcliffe Portage 2) and the other in the next embayment to the north, which Pilon proposes be called Portage Bay (BiFw-91: Rockcliffe Portage 1). Preliminary investigations of the sites resulted in the recovery of artifacts tentatively dated (in part based on comparisons to a site in

⁹ Now the Royal Ontario Museum.

Leamy Lake Park with Late Archaic occupations) as dating from the Late Archaic to the Middle Woodland periods.

Archaeological research into pre-Contact occupations on the Quebec side of the Ottawa River has been on-going since the 1970s (Jamieson 1999:23-24). These investigations began with reconnaissance work conducted in and around Gatineau Park, Aylmer Island, Parc Mousette in Hull, and at Julian's Point near Quyon in 1971 by José Benmouyal (Fortier 1997). Roger Marois (with the National Museum of Man) also carried out archaeological research at Quyon at the Baskatong Reservoir in the 1970s. In the 1980s, archaeological testing was conducted in Jacques Cartier Park and Parc Laurier, the present site of the CMH (Marois 1983; Les Recherches ARKHIS Inc. 1984). In the early 1990s, Arkéos completed archaeological potential studies in the City of Gatineau and along the north shore of the Ottawa River, just above the Chaudière Falls. Archaeological testing conducted in 1986 and 1987 by Esther Laforte resulted in the discovery of pre-Contact sites along the shore of the Ottawa River at the Plaisance Nature Reserve, as well as others northeast of Papineauville and at Saint-André-Avellin (Laforte 1987). In 1994, Jean-Yves Pinal investigated pre-Contact sites in Jacques Cartier Park (Pinal 1994). That same year, sites were located at the National Historic Site of Manoir Papineau by Monique Élie for Parks Canada, and in La Vérendrye Park by Éric Chalifoux (Fortier 1997). In addition, since the late 1980s, Marcel Laliberté has been conducting archaeological assessments in the region, including work along the Dumoine River drainage and on the Ottawa River at Rapides des Joachims and Quyon. Further, of specific interest to this study, was the discovery of several pre-Contact sites at the mouth of the Gatineau River in Leamy Lake Park by Laliberté in the 1990s (Laliberté 1992, 1995, 1996). These sites date from the Archaic to the Woodland periods, and also include several post-Contact period sites.

Taken together, this research suggests that this portion of the Ottawa River was an area of sustained use by Native peoples for many centuries, with sites associated with a portage around the Chaudière Falls and rapids, including temporary camp sites and at least one burial place.

Beginning in the 1990s, archaeological assessments have been conducted more regularly as part of the requirements of Environmental Assessments, stemming from requirements under the Canadian Environmental Assessment Act (S.C. 1992, C.37) and provincial legislation related to land use planning (eg. the Planning Act, the Environmental Assessment Act and the Aggregate Resources Act). Since that time, a number of municipal archaeological management studies or archaeological master plans have been completed in the Ottawa region, each of which has included all or portions of the present study area.

In 1991, as an adjunct to the 23 volume Chaudière Project, the NCC hired Ontario Archaeological Consulting Services (OACS 1991) to prepare a background study of potential archaeological resources in the 'Core Area West' of the National Capital Region (which involved lands on both sides of the Ottawa River, including LeBreton Flats, Bayview, the Islands, and Brewery Creek). No fieldwork was undertaken during this study, but a number of potential archaeological sites were identified on the basis of a review of historical mapping and property histories. The study identified a total of 31 potential archaeological sites (broken down into three categories, including 19 post-Contact Euro-Canadian sites, 11 industrial sites, and one pre-Contact site). Only one of these potential sites was identified within the Bayview planning zone (see OACS 1991:Figure 2); however it lay well to the north of the present study area along the shoreline of the Ottawa River.

In 1998, an archaeological resource potential study was undertaken for Federal lands in the National Capital Region by Marcel Laliberté (1998). Mapping associated with this study identifies areas of low, moderate, and high potential, although it should be noted that the potential model used was focused exclusively on pre-Contact sites. The NCC archaeological potential map, not reproduced here, does not identify any areas of pre-Contact archaeological potential within the study area.

The Archaeological Resource Potential Mapping Study of the Regional Municipality of Ottawa-Carleton (ASI and GII 1999a, 1999b), better known as the Ottawa Archaeological Master Plan, is equivalent to a general Stage 1 assessment for all land within the city boundaries. This study identifies the study area as being partly an area of archaeological potential (as shown on the City of Ottawa's eMAP web application), and the study included a recommendation that "*all lands that fall partially or wholly within the zone of archaeological potential should be subjected to comprehensive field assessment by licensed archaeological personnel prior to any land development*" (ASI and GII 1999a:72). Given the history of industrial, institutional, and residential development, destruction by fire, demolition by heavy equipment, utility line installation and road construction that characterize this part of the city, however, detailed site-specific archaeological potential assessments are warranted prior to the initiation of Stage 2 archaeological testing to 'fine-tune' test trench locations.

Further, many archaeological assessments involving post-Contact period resources have been completed within the National Capital area on both sides of the river, mostly by private consulting firms undertaking cultural resource management studies. These includes numerous assessments related to the redevelopment of the adjacent LeBreton Flats, the construction of the new east-west LRT line and work at the Lemieux Island pumping station. A complete inventory of these projects is beyond the scope of this project. To the knowledge of Past Recovery staff, no archaeological fieldwork has previously been conducted within the limits of or immediately adjacent to the present study area.

3.2.2 Previously Recorded Archaeological Sites

The primary source for information regarding known archaeological sites in Ontario is the *Archaeological Sites Database* maintained by the Archaeological Data Coordinator (ADC) at MTCS. A request for a search of the database for all registered sites located within a one kilometre radius was submitted to the ADC. Table 1 shows all registered archaeological sites occurring within a 1 km radius of the study area. It is important to note that a number of archaeological sites for which Borden Numbers have been requested from the database administrator have yet to appear in the database as registered archaeological sites as their Archaeological Site Record (ASR) forms have not been submitted to the province. For this reason, a second table listing archaeological sites known to Past Recovery staff for which no ASR form has yet been filed is provided below (Table 2).

There are no known archaeological sites located within or immediately adjacent to the study area. It should be noted that the limited number of previously recorded archaeological sites in the Bayview vicinity should not be taken as evidence of an absence of significant historical human occupation. The relative paucity of known sites, rather, is almost certainly a result of the limited amount of systematic archaeological research that has been undertaken in the immediate vicinity of the current study area.

Table 1. Listing of Registered Archaeological Sites within a 1 km Radius of the Centre of the Study Area.

<i>Site Name</i>	<i>Borden Number</i>	<i>Cultural Affiliation</i>	<i>Site Type</i>	<i>Date Range</i>	<i>Status</i>
Firth Tavern	BiFw-53	Euro-Canadian	commercial	c.1819-1860s	No further concerns*
Cathcart Square	BiFw-62	Euro-Canadian	commercial	1870-1900	No further concerns*
Levi Young House (Lloyd Street Site)	BiFw-63	Euro-Canadian	residential and industrial	1870s-1900 (Residence) & 1901-1960s (Foundry)	No further concerns*
Inlet Bridge Site	BiFw-65	Euro-Canadian	intake and headworks for Ottawa waterworks	late 19 th to early 20 th century	Further assessment recommended

Table 1. Listing of Registered Archaeological Sites within a 1 km Radius of the Centre of the Study Area. (Continued)

<i>Site Name</i>	<i>Borden Number</i>	<i>Cultural Affiliation</i>	<i>Site Type</i>	<i>Date Range</i>	<i>Status</i>
LeBreton Railyards	BiFw-66	Euro-Canadian	transportation	late 19 th to early 20 th century	No further concerns*
Passenger Depot	BiFw-67	Euro-Canadian	transportation	1880s to 1900	No further concerns*
LeBreton Flats East	BiFw-68	Euro-Canadian	residential and commercial	late 19 th to early 20 th century	No further concerns*
Old Booth Street	BiFw-70	Euro-Canadian	residential and commercial	late 19 th to early 20 th century	No further concerns*
Waterworks Yard Shed	BiFw-72	Euro-Canadian	municipal	c.1901 - 1960s	No further concerns*
McGinnis House	BiFw-73	Euro-Canadian	residential	1870-1964	No further concerns*
Meat Juice (13 and 15 Ottawa Street)	BiFw-78	Euro-Canadian	residential	1870-1900	No further concerns*
LeBreton 2002	BiFw-79		community		
Victoria Island 1	BiFw-87		n/a	n/a	
Broad Street CPR Union Station	BiFw-99	Euro-Canadian	transportation	c.1900 to c.1933	No further concerns
Western Methodist Church	BiFw-166	Euro-Canadian	Institutional - religious	1873 to 1960s	No further concerns
West End Hotel	BiFw-167	Euro-Canadian	commercial	mid-19 th to early 20 th century	No further concerns
Nos. 541-549 Albert Street outbuildings	BiFw-168	Euro-Canadian	residential	mid-19 th to early 20 th century	No further concerns
Nos. 555-561 Albert Street outbuildings	BiFw-169	Euro-Canadian	residential	mid-19 th to early 20 th century	No further concerns
Charles Pinhey Estate	BiFw-173	Euro-Canadian	residential	mid-19 th to early 20 th century	Further assessment recommended
	BiFw-174	Euro-Canadian			Further assessment recommended

* While the Ontario Archaeological Sites Database identifies these sites with 'further work recommended,' staff at Past Recovery are aware of more recent archaeological mitigations of these sites, resulting in the up-dated status information provided in this table.

Table 2. Listing of Registered Archaeological Sites within a 1 km Radius of the Centre of the Study Area Not in the Provincial Database.

<i>Site Name</i>	<i>Borden Number</i>	<i>Cultural Affiliation</i>	<i>Site Type</i>	<i>Date Range</i>	<i>Status</i>
James Skead Estate	BiFw-54	Euro-Canadian	residential	mid- to late 19 th century	No further concerns
Aubrey Row House	BiFw-55	Euro-Canadian	residential	1890s	No further concerns
E. P. Hall Grocery	BiFw-57	Euro-Canadian	commercial	late 19 th century	No further concerns
Occidental Hotel	BiFw-58	Euro-Canadian	commercial	mid- to late 19 th century	No further concerns
Ahern/Perley House	BiFw-59	Euro-Canadian	residential	mid- to late 19 th century	No further concerns
Tin Smith	BiFw-60	Euro-Canadian	commercial	mid- to late 19 th century	No further concerns
Ste. Famille Separate School	BiFw-88	Euro-Canadian	institutional and residential	mid-19 th century to 1960s	No further concerns
Broad Street Hotels	BiFw-89	Euro-Canadian	commercial	late 19 th century	No further concerns
Canada Central Railway Station	BiFw-93	Euro-Canadian	transportation	1870 to c.1880	No further concerns

3.2.3 Cultural Heritage Resources

The recognition or designation of cultural heritage resources (here referring only to built heritage features and/or cultural heritage landscapes) may provide valuable insight into aspects of local heritage, whether identified at a local, provincial, national, or international level. Of specific relevance to the present study, some of these cultural heritage resources may be associated with significant archaeological features or deposits. Accordingly, the Stage 1 archaeological assessment included the compilation of a list of cultural heritage resources that have previously been identified within or immediately adjacent to the current study area. The following sources were consulted:

- Federal Heritage Buildings Review Office online Directory of Heritage Designations (<http://www.pc.gc.ca/eng/progs/beefp-fhbro/index.aspx>);
- Canada's Historic Places website (<http://www.historicplaces.ca/en/home-accueil.aspx>);
- Ontario Heritage Properties Database (<http://www.hpd.mcl.gov.on.ca/scripts/hpdsearch/english/default.asp>);
- Ministry of Tourism, Culture and Sport's List of Heritage Conservation Districts (http://www.mtc.gov.on.ca/en/heritage/heritage_conserving_list.shtml);

- Lists of built heritage created and maintained by the National Capital Commission, the City of Ottawa and the Ontario Ministry of Tourism, Culture and Sport;
- Ontario Heritage Trust website (www.heritagetrust.on.ca/Resources-and-Learning/Online-Plaque-Guide.aspx); and,
- The Ontario Heritage Bridge List (MTO 2008).¹⁰

No previously identified cultural heritage resources were found to be located within or immediately adjacent to the present study area.

3.2.4 Heritage Plaques and/or Monuments

The recognition of a place, person, or event through the erection of a plaque or monument may also provide valuable insight into aspects of local history, given that these markers typically indicate some level of heritage recognition. As with cultural heritage resources (built heritage features and/or cultural heritage landscapes), some of these places, persons, or events may be associated with significant archaeological features or deposits. Accordingly, this study included the compilation of a list of heritage plaques and/or markers in the vicinity of the study area. The following sources were consulted:

- The Ontario Heritage Trust Online Plaque Guide (<http://www.heritagetrust.on.ca/Resources-and-Learning/Online-Plaque-Guide.aspx>);
- An extensive listing of Ontario's Heritage Plaques maintained by Alan Brown (<http://www.ontarioplaques.com/>); and,
- An extensive listing of historical plaques of Ontario maintained by Wayne Cook (<http://www.waynecook.com/historiclist.html>).

No evidence of any plaques or monuments associated with historically-significant places, persons, or events was noted within or immediately adjacent to the study area.

¹⁰ Proposed changes to provincially-owned bridges over 40 years old require an evaluation of their heritage significance using criteria contained within the MTO's *Ontario Heritage Bridge Guidelines for Provincially-Owned Bridges* (2008). If a bridge is evaluated at a score of 60 or higher, it is recommended for inclusion in the *Ontario Heritage Bridge List*, and a Statement of Cultural Heritage Value and description of the structure's heritage attributes is developed and incorporated into a Cultural Heritage Evaluation Report (CHER). The CHER then serves as a conservation manual for the structure/property. In cases where a bridge is scored below the threshold of 60 but does retain elements or attributes that are considered significant from a cultural heritage point of view, the CHER will identify these elements and provide recommendations and mitigation measures as appropriate.

3.2.5 Cemeteries

The presence of historical cemeteries in proximity to a parcel of land proposed for development can pose archaeological concerns in two respects. First, cemeteries may be associated with related structures or activities that may have become part of the archaeological record, and thus may be considered features indicating archaeological potential. Second, the boundaries of historical cemeteries may have been altered over time, as all or portions may have fallen out of use and been forgotten, leaving potential for the presence of unmarked graves. For these reasons, a Stage 1 archaeological assessment also includes a search of available sources of information regarding historical cemeteries. For this study, the following sources were consulted:

- A complete listing of all registered cemeteries in the province of Ontario maintained by the Consumer Protection Branch of the Ministry of Consumer Services;
- Field of Stones website (<http://freepages.history.rootsweb.ancestry.com/~clifford/>);
- Ontario Cemetery Locator website maintained by the Ontario Genealogical Society (<http://ogs.andornot.com/CemLocat.aspx>);
- Ontario Headstones Photo Project website (<http://canadianheadstones.com/on/cemeteries.php>); and,
- Available historical mapping and aerial photography.

The research undertaken as part of the present assessment did not uncover evidence of known cemeteries within or immediately adjacent to the present study area.¹¹

3.2.6 Local Environment

The assessment of present and past environmental conditions in the region containing the study area is a necessary component in determining the potential for past occupation as well as providing a context for the analysis of archaeological resources discovered during an assessment. Factors such as local water sources, soil types, vegetation associations and topography all contribute to the suitability of the land for exploitation and/or settlement. For the purposes of this assessment, information from local physiographic, geological and soils research has been compiled to create a picture of the environmental context for both past and present land uses.

¹¹ It should be noted that the research undertaken as part of this Stage 1 archaeological assessment is unlikely to identify the potential for the presence of unrecorded burial plots, such as those of individual families on rural properties. See Section 5.0 of this report for information regarding compliance with provincial legislation in the event that human remains are identified during future development.

The study area lies within the Ottawa Valley Clay Plains physiographic region (Chapman and Putnam 1984:113). This region is characterized by clay plains that are interrupted by ridges of rock or sand. The upper section of the region, lying above Ottawa along the river, is a broad valley with rocky Laurentian uplands rising on either side. On the Ontario shore, the slope of the bedrock is more gradual, though some prominent scarps are present.

The Bayview area is part of a till plain, flanked by terraces in the bedrock immediately to the west and further to the east (the escarpment forming Nanny Goat Hill), merging with the large flat limestone terrace of LeBreton Flats to the northeast. As its name suggests, this area lay to the south of Nepean Bay in the Ottawa River, which originally extended almost to the right-of-way between Concession A and Concession 1, before being pushed further north as a result of landfill creation during the 1933-46 and 1963-64 periods. The bedrock underlying the area is dark grey almost black limestone belonging to the Eastview Formation, flanked immediately to the southwest by shaley limestone belonging to the Ottawa Formation (MacDonald 1979: Map 1508A).

Soil mapping of Carleton County, conducted in the 1940s (Hills et. al. 1944) and the 1980s (Schut and Wilson 1987), does not include the study area as it was within the urbanized core of Ottawa. Soils mapped slightly upstream to the west over identical surficial geological deposits, however, were identified as Farmington loam, a neutral to alkaline flaggy sandy loam, fine sandy loam, loamy fine sand, or loamy sand undifferentiated drift material over Paleozoic limestone or dolomite bedrock, with bedrock typically lying within 10 to 50 centimetres of the surface (Schut and Wilson 1987:Map Sheet 3). Recent environmental site assessments which have included the study area have revealed that most of the materials lying over the bedrock consist of emplaced fills (i.e. materials placed for landscaping, building or development) over a varied sequence of natural alluvial silts and sands over thick deposits of marine silty clay (Franz Environmental Inc. 2001:24-27). This research supports surficial geological mapping of the Ottawa region conducted in the 1970s which also identified this area as part of an abandoned channel of the early Ottawa River (Richards 1982: Map 1506A).

Although the area was formerly relatively flat-lying, with the possible exception of a shallow ravine for the historic creek, extensive landfilling has modified the topography. For example, subsurface environmental testing has revealed that considerable quantities of fill were added for railway and other construction projects or generated as waste during the nineteenth and twentieth centuries. A variety of fills were imported to build up the various railway yards and lines. More recently, construction of the Albert Street/Scott Street overpass and the Tom Brown Arena have added large amounts of fill to the landscape. As a result of these fill deposits, the topography now varies in elevation from approximately 59 metres above mean sea level (AMSL) at the top of the

slope near the Tom Brown Arena to 55.5 metres AMSL in the active rail corridor, rising gently back to 57 metres AMSL at the northeastern edge of the property.

The study area is located within the Rideau Valley watershed. All of the property lies within 300 m of the original Ottawa River shoreline as it existed prior to the landfilling activities described above. Historical mapping indicates that a creek formerly ran through the eastern end of the property, emptying into Nepean Bay. This appears to have been diverted in the late nineteenth or twentieth century with the expansion of the rail yards in the vicinity.

The study area lies within the Upper St. Lawrence sub-region of the Great Lakes - St. Lawrence Forest Region (Rowe 1972). This region is characterized by a mix of coniferous and deciduous tree species. Typically, these forests include sugar maple, beech, red maple, yellow birch, basswood, white ash, large tooth aspen, and red and burr oaks. On shallower soils, conifers are more common including eastern white pine, eastern hemlock, white spruce, and balsam fir. All of the original forest growth would have been cleared over the first half of the nineteenth century.

3.2.7 Optional Property Inspection

An optional property inspection was not carried out as part of the Stage 1 archaeological assessment.

3.3 Analysis and Conclusions

This section of the report includes an evaluation of the archaeological potential within the study area, in which the results of the background research described above are synthesized to determine the likelihood of the property to contain significant archaeological resources.

3.3.1 Determination of Archaeological Potential

A number of factors are used to determine archaeological site potential. For pre-Contact sites criteria are principally focused on topographical features such as the distance from the nearest source of water and the nature of that water body or stream, areas of elevated topography including features such as ridges, knolls and eskers, and the types of soils found within the area being assessed. For post-Contact sites, the assessment of archaeological site potential is more reliant on historical research (land registry records, census and assessment rolls, etc.), cartographic and aerial photographic evidence, and the inspection of the study area for possible above ground remains or other evidence of a demolished historical structure. Also considered in

determining archaeological potential are known archaeological sites within or in the vicinity of the study area.

Archaeological assessment standards established by MTCS (*Standards and Guidelines for Consultant Archaeologists*, 2011) specify factors to be considered when evaluating archaeological potential. Licensed consultant archaeologists are required to incorporate these factors into potential determinations and account for all features on the property that can indicate archaeological potential. If this evaluation indicates that any part of the subject property exhibits potential for archaeological resources, the completion of a Stage 2 archaeological assessment is required prior to the issuance of approvals for planned development in these areas.

The study area is located within close proximity to several features indicative of potential for the presence of archaeological sites related to pre-Contact Native settlement and other land uses. These landscape features consist of the presence of level terrain with sandy soils located in close proximity to the Ottawa River and the Chaudière Falls, as well as the former creek running through the eastern end of the property. Though previous archaeological assessments within the adjacent LeBreton Flats and LeBreton South areas have generally assumed that the chances for these types of sites to have survived the extensive development of the nineteenth and twentieth centuries is very low, some of these assessments, confirmed by geo-technical studies, have demonstrated that intact buried original soil profiles remain in areas not subjected to later intrusive urban and industrial development. Railway lands in particular were created through the addition of fill, not the removal of existing soil layers. For this reason, the study area has the potential to contain previously undocumented pre-Contact archaeological resources.

Evaluating the potential for archaeological resources associated with post-Contact Euro-Canadian settlement and other land uses within urban contexts requires the consultation of available nineteenth and twentieth century maps and archival research in order to identify areas likely to contain archaeological deposits that have not been extensively disturbed or destroyed by subsequent development. To this end, numerous nineteenth and twentieth century maps were examined for this assessment, including the 1863 Walling plan of Ottawa, the 1879 Belden Atlas of Ottawa, various editions of Goad's fire insurance plans (1878, 1888, 1895, 1898, 1912, 1948, and 1956), and historical aerial photographs. Together with the archival research undertaken, these sources have provided a detailed development history of the study area and the surrounding neighbourhood.

The historical fire insurance plans and other documents were used to create an overlay map for the study area (Map 17). This presents a visual record of development over the late nineteenth and first half of the twentieth centuries, and a reference for where intact

nineteenth century or early twentieth century archaeological remains may survive. Areas revealed to have been the location of pre-1900 industrial, commercial, or residential land uses (e.g. structures, adjacent work/storage areas, undisturbed yards or other areas where buried topsoil deposits are likely to be found) and to have escaped destruction through later development exhibit archaeological potential.

It should be noted that the process of overlaying historical plans to generate a map identifying areas of archaeological potential includes numerous possible sources of error that must be recognized when evaluating the results. These include the consistency with which common reference points were mapped, differences in the quality/scale of map production, differences of scale and resolution between sources, as well as distortions introduced by scanning paper originals or reproductions (in some cases copies of copies). It is worth noting that fire insurance plans in particular were compiled from surveys for reference purposes and were not legal surveyed plans. Therefore, while care was taken throughout the process of creating the archaeological potential map included in this report, the location or configuration of any particular feature of potential should be treated as being approximate.

There has been no attempt to distinguish specific areas with archaeological integrity from areas without archaeological integrity, as the degree of integrity can only be found through field testing, and from previous experience on urban sites often areas thought to have integrity do not, and sites with cultural value have been found in areas believed to have been heavily disturbed. Further, given the proximity of the original shoreline of Nepean Bay and the original route of Richmond Road which skirted the south side of the study area and was constructed in 1819, there is also the potential for early nineteenth century archaeological remains from structures or features that had been removed by the time the late nineteenth century maps were compiled. As stated above for possible pre-Contact deposits, the fact that the area was later used for railway purposes would indicate a high chance for the survival of any early nineteenth century resources. Thus most of the study area has been determined to retain archaeological potential (Map 18).

Disturbances Related to Recent Deeply Buried Utility Lines and Other Infrastructure

Information on utility easements provided by the client revealed several areas of late twentieth century or more recent disturbance related to the installation of a variety of utility lines across the study area, including storm and sanitary trunk sewers, a watermain and several fibre-optic cables. The locations of the excavation trenches for these features can be assumed to be deeply disturbed, retaining no archaeological potential. Though only partially within the study area, the locations of the piers and approach abutments for the former Wellington Street viaduct, constructed in 1909 and removed in 1967, can also be assumed to be deeply disturbed, retaining no

archaeological potential. These areas have been added to the archaeological potential map (see Map 18).

3.3.2 Stage 1 Recommendations

The results of the Stage 1 assessment form the basis for the following recommendations:

- 1) Most of the study area is considered to have potential for archaeological sites related to pre-Contact and historic Euro-Canadian land uses, requiring Stage 2 assessment prior to any proposed development. The recommended Stage 2 work should be undertaken by a licensed archaeologist in compliance with *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011). Given that potential archaeological resources in the area are situated within a deeply buried urban brownfield context, the Stage 2 archaeological assessment strategy should consist of the excavation of test trenches by backhoe across all portions of the study area retaining archaeological potential (see Map 18).

4.0 STAGE 2 ARCHAEOLOGICAL ASSESSMENT

4.1 Stage 2 Study Area

The current Stage 2 assessment was to be confined to only a portion of the Stage 1 study area – the section consisting of the O-Train corridor managed by Capital Railway and the surrounding right-of-way containing the Champagne Multi-use Pathway (MUP) owned by the City of Ottawa (Map 19). This portion of the study area, totalling 8,738 m², consisted of three parts: the northeast section containing the MUP immediately adjacent to the fenced rail corridor as well as partially landscaped scrub, several large trees, rough parking and a temporary contractor work yard; the active rail corridor in the central and southwestern part; and a steeply sloped and wooded fringe along the southwest edge between the rail corridor and the grounds of the Tom Brown arena (Images 13 to 16). The active rail corridor contained the raised O-Train line leading to Bayview Station, as well as occasional scrub and trees and a currently abandoned former CPR spur line remaining in the corridor for emergency purposes (Image 17). Further, there were known active utility lines extending through the Stage 2 study area, including a culvert drain between the O-Train line and the abandoned CPR line and a large fibre-optic cable running northwest to southeast through the active rail corridor, a water line crossing the southeast end of the entire area, and two deep trunk sewer lines and a second fibre-optic cable running mostly northwest to southeast through the section to the northeast of the MUP (see Map 19 which shows some of these lines).

4.2 Fieldwork Methods

The Stage 2 archaeological fieldwork was undertaken over the course of three days, on November 21st, November 22nd and December 14th, 2015, with a crew of five people. Field testing methods included the mechanical excavation of nine targeted test trenches across the property, avoiding existing infrastructure and buried utility lines (see below; see Map 19). Fieldwork was conducted according to archaeological fieldwork standards outlined in *Standards and Guidelines for Consultant Archaeologists* (MCTS 2011). Weather and lighting conditions were good with overcast skies and no snow cover, providing excellent visibility, ideal conditions for the identification, documentation and, where appropriate, recovery of archaeological resources.

Given that the property consisted mostly of deep fill deposits, as determined following a review of previous environmental assessment borehole and test pit results (AMEC 2005; Franz Environmental Inc. 2002, 2001; Golder Associates Ltd. 2007, 2005; Paterson Group Inc. 2012a, 2012b), as well as being a former rail yard setting, the Stage 2 testing consisted of targeted mechanically excavated slit trenches placed across the site. These slit trenches were placed away from known disturbances, such as utility lines and late

twentieth century infrastructure, in order to determine whether there were any archaeological deposits surviving in minimally disturbed locations. To this end, initially a total of ten test trenches were planned across the study area (see Map 19).

As much of the central and southwestern portion of the Stage 2 study area lay within the active O-Train corridor, extra safety precautions would normally have been required. It was found, however, that the week-end of November 21st had already been scheduled by Capital Railway as maintenance days, with the O-Train being shut down during that period. Thus testing within the active corridor was scheduled for November 21st. As stated above, initially ten trenches were planned for the study area with four (Test Trenches 1 to 4) lying within the active corridor, and had been pre-located as a desk-top exercise following the results of the Stage 1 assessment. The locations of all ten trenches were surveyed and staked by Stantec Geomatics Ltd., with surface elevations in metres recorded on each stake. Upon arrival at the site, however, it was found that the numerous obstacles on the ground in the active corridor (the rail lines, the buried utility lines, trees that could not be removed and a fenced work area with an extensive pile of fill related to the construction of a second MUP on the opposite side of the rail line), as well as extra required safety precautions (the rail lines could not be driven over by the back-hoe and the test trenches could not be extended within a few metres of any ballast below the tracks), necessitated the shifting of all four units in this area. The proposed placement of Test Trench 1 had been so compromised by underground utility lines and the MUP work zone that it was abandoned (Image 18). The locations of the six additional trenches to the northeast of the Champagne MUP were excavated as pre-plotted. The fringe to the southwest of the active corridor was steeply sloped and too heavily treed to test; it was also known that the slope consisted entirely of 1970s fill. Given the extent of disturbances and physical obstacles such as the foot-prints of the O-Train line and the Champagne MUP which could not be tested, the test trenches planned for this part of the property ensured adequate coverage of the areas with archaeological potential.

Underground utility locates were ordered and all test trench locations were checked by the locating companies prior to the commencement of excavation, though one company failed to appear on November 21st, necessitating shifting the active corridor work (Trenches 2 to 4) to the following day. The remaining six units (Trenches 6 to 10) were completed on December 14th. Grid north was established parallel to the O-Train line to facilitate the description of soil profiles and features in the test trenches, which were almost all excavated either parallel to or perpendicular to the railway track.

GPS Recording Methods

As well as the manual recording described below, a hand-held Geographic Positioning System (GPS) receiver was also used to record the location and extent of each test trench

and any features of interest. The GPS unit used in this assessment was a Garmin GPSMAP 60CSx, equipped with a built-in quad helix antenna capable of calculating its position to within 10 metres (95% typical). This unit was also capable of receiving Wide Area Augmentation System position correction signals, which improved the accuracy of the position reporting to within 3 to 5 metres under ideal conditions (95% typical). At the time of Stage 2 property survey, the GPS consistently gave estimated probable error readings of less than 3 metres.

Mechanical Test Pit Excavation and Recording Methods

All test trenches were carefully excavated using a back-hoe with a smooth-edged ditching bucket, removing a few centimetres of material at a time under the supervision of a licenced archaeologist (Image 19). The trenches were approximately 1.1 metres in width and varied in length (see individual trench descriptions below). Each trench was given a Trench Number designation, with different soil layers identified during excavation assigned a lot number in the order of appearance; any artifacts noted were collected and assigned to the appropriate soil layer. Where possible, any archaeological features, buried original topsoil layers or significant artifact deposits encountered were excavated by hand and screened through 6 millimetre hardware mesh. Upon the completion of excavation (reaching either an *in situ* feature obstructing further work, deep fill or sterile subsoil), one of the long soil profiles was photographed and drawn at 1:20 scale, as well as a plan view if merited (Image 20). In units deeper than 1.2 m recording was undertaken within the trench once the 1.2 m depth had been reached to maintain as much accuracy as possible. The excavation of the unit was then continued, and recording completed from the surface for safety reasons. The orientations of all test trenches were plotted on a site map and GPS points were recorded for each trench. After all recording activities were complete, each trench was immediately back-filled for site safety reasons.

All field activities were recorded through fieldnotes and digital photographs. A catalogue of the material generated through the Stage 2 property survey is included below in Table 3. The complete photographic catalogue is attached as Appendix 1, and the locations and orientations of all photographs used in this report are shown on Map 20.

4.3 Laboratory Methods

Following the completion of the Stage 2 archaeological fieldwork, the 35 artifacts recovered were cleaned, catalogued with their full provenience and inventoried using a modified version of a database designed by staff at Parks Canada (Christianson and Plousos n.d.). The complete inventory information for the artifacts recovered is included as Appendix 2, and a sample of representative artifacts were photographed for

Table 3. Inventory of the Stage 2 Documentary Record.

Type of Document	Description	Number of Records	Location
Photographs	Digital photographs documenting the Stage 2 property survey	166 photographs	On Past Recovery computer network - file PR15-41
Field notes and profile drawings	Notes on the Stage 2 survey and drawings at 1:20 scale	12 pages	Past Recovery office - file PR15-41
Site plan	Surveyed site plan showing altered test pit locations	1 map	Past Recovery office - file PR15-41
Artifacts	Artifacts collected during the Stage 2 assessment	35 Post-Contact Euro-Canadian artifacts	Past Recovery office

inclusion in this report. As per the *Terms and Conditions for Archaeological Licences* in Ontario, curation of all artifacts collected during the Stage 2 archaeological assessment is being provided by Past Recovery Archaeological Services Inc. pending the identification of a suitable repository. The complete assemblage comprises less than one standard-sized banker's box of artifacts.

4.4 Results

With the abandonment of Test Trench 1, a total of nine mechanical trenches were excavated across the study area (see Map 19). These have been described below in sequence.

4.4.1 Test Trench 1

Test Trench 1 was to be located at the northwest end of the active O-Train corridor within the study area, to investigate the soil stratigraphy in this area (see Map 19). Once fieldwork was begun, however, this unit was found to lie within the path of a large fibre-optic cable and adjacent to a drain culvert, as well as on the edges of an active work area associated with the construction of a new multi-use pathway on along the southwest side of the rail corridor, and was thus abandoned (see Image 18).

4.4.2 Test Trench 2

Test Trench 2 was located within the active O-Train corridor towards the northwest end of the abandoned rail line, between the rail bed for this line and the chain-link fence marking the southwest edge of the property, placed to investigate the soil stratigraphy in this area (see Map 19). The trench was excavated in a northwest to southeast direction and measured 3.64 m in length by 1.05 m in width. The soil stratigraphy consisted of c. 20 cm of sod and loose brown sand fill (Lot 1) above 10 cm to 15 cm of loose lighter brown sand (Lot 2), both late twentieth century deposits post-dating the

removal of most of the rail lines in the vicinity in the mid-1960s (Images 21 and 22). Below Lot 2 was a layer of black clinker up to 25 cm thick (Lot 3), representing the rail surface following the relocation of the roundhouse in 1911. This lay above two levelling fill deposits consisting of grey sandy clay (Lot 4) and yellow/grey silty clay (Lot 5) with a combined thickness of c. 10 cm, both containing cobbles and occasional boulders, and representing bedding for the 1911 to 1960s railway surface. Beneath Lot 5 was a 2 cm to 12 cm thick demolition layer of dark red/brown sandy clay with occasional red brick, mortar and ferrous metal fragments (Lot 6), likely remnant material from the removal of the fire-damaged roundhouse in 1911. Below this was a 20 cm to 30 cm layer of railway material (Lot 7) consisting mostly of black cinder and clinker, but also including smaller lenses of furnace ash, fine sand, gravel and shale (the last probably representing levelling fill). This deposit contained a carriage wheel spring from a railway car, and represented the earlier railway surface dating from the construction of the original St. Lawrence and Ottawa Railway line in 1871 to the demolition of the round house in 1911 (Image 23). Also found in this lot were part of a porcelain interior electrical insulator and two sherds of vitrified white earthenware tableware, one with a blue transfer printed 'Willow' pattern and the other being part of a semi-porcelain plate with an over-glazed painted red mark possibly dating to 1895 (Image 24; <http://www.ebay.co.uk/gds/Registered-Numbers-Reg-No-Age-Dating-1884-1965-/10000000016925194/g.html>). Below the railway layer in the north end of the trench was a levelling fill layer consisting of thin lenses of sandy silt (Lot 8), with a total thickness of up to 14 cm, over a thin remnant buried topsoil (Lot 9) which appeared to have been mostly removed. This lay above orange/brown sand subsoil grading to yellow sand subsoil continuing to at least 1.7 m below grade.

4.4.3 Test Trench 3

Test Trench 3 was also located within the active O-Train corridor between the abandoned rail line bed and the chain-link fence marking the southwest edge of the property, placed to the southeast of Test Trench 2 to investigate the soil stratigraphy in this area (see Map 19). The trench was excavated in a northwest to southeast direction and measured 3.50 m in length by 1.09 m in width. The soil stratigraphy consisted of up to 40 cm of loose dark brown sandy loam with railway clinker and coal (Lot 1) over 2 cm to 10 cm of loose red/brown sand fill (Lot 2) and a further c. 10 cm of railway clinker (Lot 3) found only in the southern end of the trench (Image 25). All of these deposits represented the post-1911 railway surface in this area, as well as the modern topsoil following the abandonment of much of the rail yard in the 1960s. Below Lot 3 was a c. 25 cm thick layer of grey silty clay with occasional red brick fragments (Lot 4) over 15 cm to 20 cm of mixed red/brown sand and grey silty clay (Lot 5) containing demolition material including red brick and wood fragments, likely dating to the removal of the nearby roundhouse in 1911 (Image 26). The demolition material lay above a further deposit of grey silty clay with rocks and boulders (Lot 6) extending to at

least 1.75 m below grade and thus appearing to be subsoil (Image 27). The original topsoil had likely been removed during levelling activities associated with the construction of the adjacent roundhouse. No artifacts were recovered from this test trench.

4.4.4 Test Trench 4

Test Trench 4 was also located within the active O-Train corridor between the abandoned rail line bed and the chain-link fence marking the southwest edge of the property, placed to the southeast of Test Trench 3 to investigate the area for remnants of the 1883 roundhouse (see Map 19). The trench was excavated in a northwest to southeast direction and measured 3.70 m in length by 1.10 m in width. The soil stratigraphy consisted of c. 10 cm of sod and loose dark brown loam and cinder (Lot 1) over up to 50 cm of black railway cinder and clinker (Lots 2 and 4) containing lenses of light brown sand (Lot 3) likely representing bedding for the realignment of a track through this area (Image 28). The lower railway deposit contained indentations representing removed railway ties, indicating that there had been another siding or line running through this area (Image 29). All of these railway layers post-dated the relocation of the roundhouse in 1911. Below Lot 4 was a thin deposit of light grey silty clay containing demolition material (Lot 7), lying above a cut stone and mortar foundation wall extending across the trench on a northeast to southwest angle (Images 30 and 31). The wall was encountered at approximately 55 cm to 80 cm below grade and was 60 cm wide. Only the top of this feature was exposed. The Lot 7 grey silty clay continued below the wall top to the southeast or interior side of the wall; to the northwest was dark red/brown sand (Lot 5) contained within a construction trench c. 34 cm wide. The wall was an intact section of the 1883 roundhouse foundation, likely part of the exterior or southern wall of the building arcing around the engine stalls. The construction trench had been cut into sterile grey silty clay subsoil (Lot 6), the original topsoil having been removed during the erection of the building. No artifacts were recovered from this test trench.

4.4.5 Test Trench 5

Test Trench 5 was located to the northeast of the existing recently constructed Champagne MUP running parallel to the northeast boundary fence of the active O-Train corridor, towards the northwest end of the study area (see Map 19). The test trench was placed to investigate the soil stratigraphy in this area. It was excavated in a north to south direction northwards from the stake to avoid both a recently planted tree and a recently constructed gravel access path to the MUP, and measured 3.50 m in length by 1.10 m in width. The upper four soil layers sloped down from west to east, and consisted of 15 cm to 20 cm of sod and brown loam (Lot 1), over 14 cm to 20 cm of coarse gravel (Lot 2), over 10 cm to 20 cm of fine gravel (Lot 3), over 4 cm to 20 cm of

loose yellow sand (Lot 4) (Image 32). All of these appeared to be recent deposits associated with either the on-going landscaping around the Bayview O-Train station or the creation of the adjacent parking surface. Beneath Lot 4 was a c. 20 cm to c. 30 cm thick mixed deposit of mottled dark brown and grey/brown sandy clay fill with lenses of yellow sand (Lot 5), applied to level the area after the removal of the rail yard in the mid-1960s. This deposit lay above a 20 cm to 35 cm thick deposit of railway clinker and coal (Lot 6) representing the active rail yard surface between 1911 and the mid-1960s (Image 33). This rested on a 4 cm to 10 cm thick layer of light grey sand bedding (Lot 7), over a second deposit of railway material approximately 20 cm thick (Lot 8) representing the late nineteenth century to 1911 rail yard surface. This contained a large machine cut ferrous bolt, and in turn rested on a second bedding deposit consisting of up to 10 cm of loose light brown sand (Lot 9). Below Lot 9 was a c. 15 cm thick dark brown sand surface possibly representing a buried topsoil layer (Lot 10), above a layer of light grey silty clay of similar thickness (Lot 11) (Image 34). Lot 10 contained a small section of a white clay smoking pipe bowl, a calcined mammal bone and a small sherd from the foot-ring of a plain refined white earthenware hollowware vessel, all likely dating to the mid-nineteenth century and possibly pre-dating the 1871 construction of the original St. Lawrence and Ottawa Railway line. Beneath Lot 11 was up to 50 cm of orange/brown sand subsoil (Lot 12) grading to compact light grey silty clay (Lot 13) and extending to at least 2.4 m below grade.

4.4.6 Test Trench 6

Test Trench 6 was located to the northeast of the existing recently constructed Champagne MUP running parallel to the northeast boundary fence of the active O-Train corridor, to the southeast of Test Trench 5 (see Map 19). The test trench was placed to investigate the soil stratigraphy in this area and to attempt to locate remains of the late nineteenth century turntable known to have been constructed in the vicinity. This trench was excavated in a slightly more westerly to easterly direction than most of the other test trenches to avoid a recently planted tree, and measured 3.50 m in length by 1.10 m in width. The upper three soil layers consisted of relatively recent material including c. 5 cm of sod and loose sandy loam (Lot 1), up to 20 cm of loose dark brown sandy loam and gravel (Lot 2) and 45 cm of loose brown sand with pebbles and cobbles (Lot 3), all associated with landscaping for both the adjacent multi-use pathway and an earlier parking area (Image 35). Below this was a c. 10 cm thick layer of dark grey/brown sandy loam fill with occasional mortar patches (Lot 4) and a lens of yellow/brown sand (Lot 6), the latter found only in the eastern third of the unit. Lots 4 and 6 lay above a c. 20 cm thick layer of railway clinker and coal (Lot 5) and a thin c. 2 cm deposit of black silty sand (Lot 7), both representing the 1911 to mid-1960s railway yard surface. Below these was a bedding/levelling deposit consisting of 10 cm to 14 cm mottled light yellow/brown silty clay with fine lenses of clinker (Lot 8), which lay above up to 6 cm of orange/brown sand (Lot 9) and up to 20 cm of very mixed

orange/brown, brown and black sand with demolition debris including white mortar patches, red brick fragments, cut limestone pieces and fragments of concrete (Lot 10) (Images 36 and 37). The material within Lot 10 probably resulted from the demolition of the remains of the nearby roundhouse in 1911. Beneath Lot 10 was a lower c. 55 cm thick railway deposit (Lot 11) possibly representing the pre-1911 surface. A large machine cut ferrous bolt shank and two sherds of machine made oil lamp chimney were recovered from this layer (see Image 24). The railway deposit lay above another c. 25 cm thick railway layer with very large pieces of coal, fragments of wooden boards, red bricks and a few large pieces of ferrous metal (Lot 12). Below Lot 12 was c. 10 cm of dark brown sandy loam with boulders and occasional red bricks (Lot 13), covering a roughly east-west running apparently *in situ* wooden beam encountered at 2.45 m below grade, perhaps part of the 1883 turntable (Image 38). Ground water was encountered at the same level.

4.4.7 Test Trench 7

Test Trench 7 was located to the northeast of the existing recently constructed Champagne MUP running parallel to the northeast boundary fence of the active O-Train corridor, to the southeast of Test Trench 6 (see Map 19). The test trench was placed to investigate the soil stratigraphy in this area and to attempt to locate remains of the late nineteenth century roundhouse known to have been in this area. The trench was excavated in a northwest to southeast direction and measured 4.18 m in length by 1.00 m in width. The upper three soil layers consisted of relatively recent material including c. 25 cm of sod and dark brown loam topsoil (Lot 1), over 12 cm to 14 cm of dark brown sandy loam with gravel (Lot 2), over c. 10 cm of loose yellow/brown sand levelling fill (Lot 3) (Image 39). The gravel and sand levelling fill appears to have been associated with an earlier path or parking surface. Below Lot 3 was up to 45 cm of grey sandy clay with occasional pieces of demolition debris including red bricks, mortar, coal and boulders mixed with pockets of yellow/brown sand (Lot 4). A section of ferrous metal tubing, a piece of red stoneware drain tile and a sherd of machine made green glass tableware were recovered from this lot, which lay above a c. 6 cm thick deposit of fine yellow/brown sand (Lot 5) confined to the eastern half of the trench. Both Lots 4 and 5 were landscaping fill layers applied following the removal of the rail yards in the mid- to late 1960s. Below Lot 5 and Lot 4 in the western half of the trench was a black clinker and silty clay railway layer (Lot 6) varying between 8 cm and 14 cm in thickness, representing the post-1911 active railway surface in this area. Lot 6 rested on a 2 cm to 4 cm thick layer of mottled light grey sandy clay fill with occasional red brick fragments (Lot 7), which in turn lay above a 6 cm to 10 cm thick deposit of mottled dark brown and black sandy clay with red brick, rock and wood pieces indicative of a demolition event (Lot 8), likely the removal of the fire-damaged roundhouse in 1911.

Lot 8 covered a cut limestone and mortar foundation wall crossing the trench with a slight arc in a northeast to southwest direction (Images 40 and 41). The wall was encountered at 1.2 m below grade and was approximately 60 cm wide. It was encountered within a construction trench extending to both sides, c. 30 cm to 45 cm to the west and c. 55 cm to the east, containing light grey clay and rock fragments (Lot 11). On the east side this had been cut through a remnant of the original topsoil (Lot 10) consisting of dark brown sandy loam, which survived in a c. 25 cm wide band; elsewhere the area had been scraped to orange/brown sand subsoil (Lot 9) prior to the construction of the building. The wall was likely part of the interior curved foundation wall of the CPR roundhouse erected in 1883 and partially burned in 1910.

4.4.8 Test Trench 8

Test Trench 8 was located in the northern corner of the study area adjacent to a recently constructed embankment associated with a new pathway leading to the Bayview O-Train station to the south of the Albert Street bridge (see Map 19). It had to be angled slightly to the south to fit between existing trees. The test trench was placed to investigate the soil stratigraphy in this area, and was excavated in a northwest to southeast direction, measuring 3.60 m in length by 1.00 m in width. This trench was capped with c. 45 cm of sod and modern grey/brown loamy clay topsoil (Lot 1), over c. 20 cm of orange/brown cobble-filled sand (Lot 2) deposited as landscaping fill (Image 42). Beneath these were two additional fill deposits: up to 12 cm of dark grey silty sand (Lot 3), over c. 6 cm of yellow/brown sand confined to the eastern end of the trench (Lot 4). Both of these deposits post-dated the removal of the railway yard in the mid- to late 1960s. Below Lot 4 was a c. 18 cm thick layer of railway clinker with mottled clay and red brick fragments towards the base (Lot 5), which lay above a c. 10 cm thick stratum of relatively clean yellow/brown sand (Lot 6), being bedding material for the post-1911 railway yard surface represented by Lot 5 above. Beneath Lot 6 was a second deposit of railway clinker containing demolition debris including large slabs of concrete, many wood pieces and disused sections of steel pipe, both 15 cm and 5 cm in diameter and running in different directions (Lot 7) (Image 43). Excavation was halted at 1.25 m below grade when additional large pieces of debris were encountered. It is likely that this material was not related to the removal of the 1883 roundhouse after the 1910 fire, but either to a later railway period structure (there were several twentieth century buildings in the vicinity), or that it was part of the fill added to construct the embankment for the Albert Street bridge in 1968.

4.4.9 Test Trench 9

Test Trench 9 was located along the northeastern edge of the study area to the southeast of Test Trench 8, in an area currently gravelled for parking (see Map 19). The test trench was placed to investigate the soil stratigraphy in this area, and was excavated in

a northwest to southeast direction, measuring 3.50 m in length by 1.00 m in width. The soil layers in the upper part of the trench were very similar to those in Test Trench 8, consisting of up to 40 cm of sod and modern grey/brown loamy clay topsoil with occasional pebbles (Lot 1), over 22 cm to 30 cm of orange/brown cobble-filled sand (Lot 2) deposited as landscaping fill (Image 44). Beneath this was an additional fill deposit consisting of 12 cm to 20 cm of grey silty sand with gravel and ash pieces (Lot 3), placed in this area following the removal of the railway yards in the mid- to late 1960s. Below Lot 3 was a 40 cm to 45 cm thick layer of railway clinker with lenses of gravel, pane glass and ferrous metal towards the base (Lot 4), which lay above at least 45 cm of yellow/brown/grey clay with numerous cobbles and occasional boulders (Lot 5) (Images 45 and 46). It was difficult to determine whether the latter deposit was subsoil or fill, though it did contain a lens of orange/brown sand towards the base of the excavation. If it was subsoil, then the Lot 4 railway layer was in use during the entire railway period from 1871 to the mid- to late 1960s.

4.4.10 Test Trench 10

Test Trench 10 was located along the northeastern edge of the study area to the southeast of Test Trench 9, in a currently grassed and scrub-covered location to the north of a temporary construction yard (see Map 19). The test trench was placed to investigate the soil stratigraphy in this area, as well as to determine if there were any remains from a small structure illustrated on the 1885 fire insurance plan to the north of the turntable. This unit was excavated in a northeast to southwest direction, measuring 3.50 m in length by 1.00 m in width. The trench was capped by 16 cm to 30 cm of sod and dark brown sandy loam topsoil (Lot 1), lying above up to 50 cm of modern brown sandy clay fill containing numerous pieces of plastic, rebar, aluminum foil and wire (Lot 2), as well as a second 4 cm to 14 cm thick landscaping deposit consisting of mottled light and dark brown sand (Lot 3) (Image 47). Below this was an approximately 5 cm thick band of dark grey gritty sandy loam with occasional ferrous metal pieces (Lot 4); all four of these initial layers post-dated the removal of the railway yards in the mid- to late 1960s. Beneath Lot 4 was a c. 14 cm thick compact layer of black railway clinker (Lot 5), over a less than 4 cm thick fairly smooth band of dark grey/black silty sand (Lot 6), both representing the last phase of railway development in this area extending to the mid-1960s (Image 48).

The railway deposits lay above levelling fill consisting of up to 42 cm of light yellow/grey silty sand with pebbles and cobbles (Lot 7), which in turn rested on a thin (2 cm to 8 cm) layer of black/dark brown sandy loam with coal, clinker and demolition debris including pane glass, wood fragments, ferrous metal and occasional red brick or concrete pieces, much of which appeared to have been burnt (Lot 8) (Image 49). This layer contained the most artifacts recovered during the investigation, consisting of a carbon rod from an arc lamp, a sherd of porcelain hollowware tableware, a small sherd

of turquoise transfer printed semi-porcelain tableware, a fragment of window glass, part of a glass machine made handle from a jug or mug, a sherd from a turn-paste mould blown wine or beer bottle, a sherd from a mould blown gin bottle embossed "[BLANKE]NHE[IM]/[& NO]LE[T]," a large machine cut ferrous bolt shank, a machine cut spike, a machine cut nail, a wire nail surrounded by melted glass, a fragment of concrete, and sherds from three glass exterior electrical insulators and two porcelain interior electrical insulators (see Image 24). One of the last had been manufactured by the Davidson Porcelain Co. between 1920 and 1936 (<http://www.r-infinity.com/Companies/>). The origin of this deposit is uncertain – the fire evidence suggest that it resulted from the demolition of the nearby 1883 roundhouse after the 1910 fire; however at some of the artifacts, in particular the electrical insulators, appear to be much later. This deposit may thus instead have been related to the removal of a mid-twentieth century structure, though none are illustrated in this area on the mid-century fire insurance plans.

The fire or demolition deposit lay above a second thick (up to 60 cm) stratum of light yellow/grey silty sand fill (Lot 9) containing red terra cotta drain tile fragments (a sample of which was retained) and covering a second 20 cm thick black clinker-laden railway deposit (Lot 10) representing the earliest railway yard, post-dating the construction of the St. Lawrence and Ottawa Railway in 1871. A second arc lamp carbon rod was recovered from this layer, suggesting it remained the active surface into the twentieth century (see Image 24). Though arc lamps were selectively used earlier in the nineteenth century, they became popular for lighting public places after c. 1877 (Woodhead, Sullivan and Gusset 1984:75). Below this was a deposit of dark grey/brown silty sand (Lot 11) containing a few large limestone blocks which appeared to cross the unit in an east-west alignment towards the north end of the trench (Image 50). The alignment may have been structural, but this was uncertain as there was no apparent mortar or other building material, and the depth of the trench was too deep for hand investigation. Lot 11 may have been the buried original topsoil, as below it was clean orange/brown sand subsoil (Lot 12).

4.5 Analysis and Conclusions

The general soil stratigraphy across the site consisted of up to approximately one metre of post-1968 landscaping fill (ranging from fairly extensive in Test Trench 5 to relatively thin in the active rail corridor), above at least two railway surfaces with associated bedding deposits and in some cases a demolition deposit between them. These have been assumed to be the original St. Lawrence and Ottawa Railway and later Canadian Pacific Railway line and yard surface associated with the original (1871) engine house and later 1883 roundhouse, below the reorganized yard following the removal of the 1883 roundhouse in 1911. Remains from the 1883 roundhouse in the form of intact foundation walls were found in Test Trenches 4 and 7, as expected given the results of

the historical fire insurance plan overlay (see Map 17). It is likely the intact wooden beam found in Lot 13 in Test Trench 6 was related to the 1883 turntable, but the depth of the fill deposits and demolition debris in this unit precluded the verification of whether or not the beam was *in situ* or if there were additional *in situ* remains. Aligned large rocks in Lot 11 in Test Trench 10 may have been related to the structure depicted in the vicinity northeast of the turntable on the 1885 fire insurance plan (see Map 8), but again given the depth at which they were encountered this could not be verified; moreover the overlay plan suggests that the building lay further to the northeast, in an area disturbed by one of the mid-twentieth century sewer collectors (see Map 17).

The excavation of Test Trench 8 appears to have encountered the demolished remains of one of the post-1911 office buildings, including disused utility lines servicing the structure or the later 1911 roundhouse. As stated above, the fire deposit in Trench 10 (Lot 8) is intriguing, perhaps relating to the destruction of the eastern half of the 1883 roundhouse in 1910, though this is uncertain. The presence of the dated porcelain electrical insulator suggests that this layer was deposited during a later event, though it appears to be below the level of the reorganized post-roundhouse-demolition yard. Original buried topsoil deposits were encountered in Test Trench 2 (Lot 9) and Test Trench 5 (Lot 10), and possibly in Test Trench 7 (Lot 10) and Test Trench 10 (Lot 11). The only clearly nineteenth century artifacts were recovered from the buried topsoil in Test Trench 5, but were too few to indicate that there were intact archaeological deposits in this area. Elsewhere the original topsoil appears to have been removed by either the construction or the demolition of the 1883 roundhouse. The depth of the fill deposits below the railway layers over the Stage 2 study area and the presence of sterile sand and silty clay subsoil appears to confirm that this was the location of an earlier river channel.

Where they were encountered, the CPR roundhouse foundation walls were surprisingly intact, and represent a significant archaeological resource. This was one of less than a dozen engine houses/roundhouses constructed by various companies in the Ottawa area (most were fairly small), and except for the Canada Atlantic Railway roundhouse constructed at Mann Avenue at the end of the 1890s was certainly the largest erected in the nineteenth century. Other criteria indicating that this structure has cultural heritage value or interest meriting further archaeological investigation include its age, demolition date and the integrity of the site. The CPR roundhouse was constructed in 1883, when this company was in the process of absorbing the three smaller railway companies with existing lines into the Chaudière area (the St. Lawrence & Ottawa – already in the study area, the Canada Central, and the Quebec, Montreal, Ottawa & Occidental), and was used for only 27 years before being destroyed by fire in 1910. Engine maintenance was then or within a year relocated to a new facility further to the west, situated below the current Tom Brown Arena. The remains of the 1883 roundhouse were then levelled and capped c. 1911 with fill and a new railway yard

surface containing sidings and later small offices and outbuildings, with only two outbuildings appearing to have been constructed directly above the roundhouse (both located within the now active O-Train corridor or below the recently completed Champagne MUP). This capping appears to have preserved the remains of the nineteenth century building. A post-1968 trunk sewer and a later water line (and perhaps more recent fibre-optic cables, though the trenches for these were likely fairly shallow) have likely impacted part of the foundation, but otherwise the integrity of the surviving structure has remained undisturbed since c. 1911, as demonstrated in Test Trenches 4 and 7, the only test trenches placed over the building (once the units in the active corridor had been relocated given obstacles and restrictions to excavation). Further, as the eastern half of the roundhouse (the section to the northeast of the Champagne MUP) had been destroyed by fire rather than deliberately vacated prior to demolition (whether this section of the building had been rebuilt and used for a short time prior to relocation could not be determined from the historical research, but seems unlikely), there is the likelihood that artifacts including tools and other period railway-related items could be recovered. Though the retrieval of artifacts would not be the primary focus of further archaeological assessment (see below), given the significance placed on railway history by many residents of this city items associated with the CPR in the late nineteenth century/early twentieth century in Ottawa would be considered to have cultural heritage value or interest.

No remains from the earlier St. Lawrence & Ottawa Railway engine house/turntable constructed in the same location as early as 1871 were encountered in any of the test trenches. Given inaccuracies with the scales of the 1872 plan and the 1879 subdivision plan showing this structure (see Maps 6 and 7), the size and exact location of this structure is uncertain; the engine house appears only to have been large enough to accommodate one locomotive. The likelihood, however, is that remains from this earlier structure have been removed by the later and much larger 1883 building, unless they lie further to the northeast.

Though few related artifacts were encountered, further documentation of the 1883 roundhouse foundation is recommended given its cultural heritage value or interest. The obstacles and limitations within the active rail corridor, however, preclude further archaeological excavation in this area. These include the constricted space between the abandoned rail line and the fence at the base of the wooded slope up to the Tom Brown Arena, the adjacent active O-Train which would restrict excavation to overnight hours when the train is not in service, trees of a certain size within the corridor that cannot be removed without permission, exclusion of any areas within a metre of railway line bedding from excavation, existing utility infrastructure including a major fibre-optic cable, and a restriction from driving heavy machinery across the abandoned rail line. All of these limitations make further work in the active corridor in the vicinity of Test Trench 4 impractical and hazardous.

Fortunately, given its size, a substantial section of the roundhouse foundation and its related infrastructure appears to be preserved relatively intact on the City of Ottawa property to the northeast of the Champagne MUP, as demonstrated in Test Trench 7. Further archaeological assessment in this area should expose enough of the building to recover the necessary information to consider it documented (i.e. dimensions, internal layout, construction techniques, phasing, etc. that can be projected across the entire foot-print from examining the smaller section). As development within this part of the rail corridor is likely to occur, particularly with the planned re-routing of the existing sanitary trunk sewer, further archaeological assessment will be required in advance of the planned construction.

Upon consultation with an Archaeological Review Officer at MTCS, given the nature of the building and associated archaeological deposits, further assessment would be considered to take place in a deeply buried urban/brownfield context, and would likely deviate somewhat from excavation standards laid out in *Standards and Guidelines for Consultant Archaeologists* (2011). A short Stage 3 assessment followed by a Stage 4 assessment will be required to document the roundhouse remains before they are removed. The former would consist of the excavation of several additional mechanical test trenches to define the limits of the building and associated infrastructure, as well as determine the degree of later utility line disturbance. This would be followed by the Stage 4 component, which would consist of the mechanical removal of the overlying fill and railway deposits to expose and any structural remains. These would be cleaned by hand and recorded, with any smaller features hand excavated should soil conditions permit. A thorough review of all existing environmental soil investigation reports would be required to determine the levels and types of toxins within the soils surrounding the roundhouse prior to any Stage 4 fieldwork, to develop an appropriate hand excavation methodology, particularly with regards to soil screening and the recovery of artifacts.

The area requiring further archaeological assessment has been illustrated on Map 21, together with the approximate locations of known nineteenth century structures in the current Stage 2 study area. It can be seen that this area covers the probable extent of the roundhouse between the existing Champagne MUP (which is to remain in place) and the location of the existing sanitary trunk sewer along the northeastern edge of the City property. The Stage 3 study area has also been extended to the northwest of the building both to ensure that remains from the unknown structure in the vicinity of Test Trench 10 do not survive and have been completely removed by the construction of the sanitary sewer, and to ensure that nothing remains of the earlier St. Lawrence & Ottawa engine house.

4.6 Stage 2 Recommendations

The results of the Stage 2 assessment form the basis for the following recommendations:

- 1) The remains of the 1883 Canadian Pacific Railway roundhouse identified in Test Trenches 4 and 7 are considered to have cultural heritage value or interest meriting Stage 3 and Stage 4 archaeological assessment (see Map 21). As Test Trench 4 was located within a restricted space in the active O-Train corridor, the further assessment should be focussed in the vicinity of Test Trench 7, perhaps extending as far north and northeast as Test Trenches 6 and 10. The recommended work should be undertaken by a licensed archaeologist in compliance with *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011).
- 2) As the area is situated within a deeply buried urban brownfield context, the archaeological assessment strategy should consist of the excavation of further mechanical test trenches at Stage 3 to confirm the limits of the roundhouse and associated infrastructure, followed at Stage 4 by the exposing of the structural remains by heavy machinery and detailed recording by hand.
- 3) A comprehensive review of all relevant soils testing environmental assessment reports should be undertaken prior to the initiation of the Stage 4 archaeological assessment in order to identify potential human health risks and determine appropriate mitigation measures, particularly as related to hand excavation involving soil screening and the recovery of artifacts.

The reader is also referred to Section 5.0 below to ensure compliance with relevant provincial legislation as it may relate to this project.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

In order to ensure compliance with provincial legislation, the reader is advised of the following:

- 1) This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the Ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
- 2) It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- 3) Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.
- 4) The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.
- 5) Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

6.0 LIMITATIONS AND CLOSURE

Past Recovery Archaeological Services Inc. has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the archaeological profession currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied, is made.

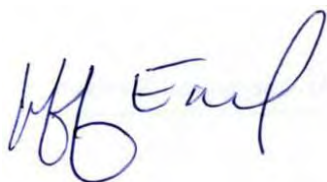
This report has been prepared for the specific site, design objective, developments and purpose prescribed in the client proposal and subsequent agreed upon changes to the contract. The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the client in the design of the specific project.

Special risks occur whenever archaeological investigations are applied to identify subsurface conditions and even a comprehensive investigation, sample and testing program may fail to detect all or certain archaeological resources. The sampling strategies in this study comply with those identified in the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists* (2011).

The documentation related to this archaeological assessment will be curated by Past Recovery Archaeological Services Inc. until such a time that arrangements for their ultimate transfer to an approved and suitable repository can be made to the satisfaction of the project owner(s), the Ontario Ministry of Tourism, Culture and Sport and any other legitimate interest group.

We trust that this report meets your current needs. If you have any questions or if we may be of further assistance, please do not hesitate to contact the undersigned.



Jeff Earl
Principal
Past Recovery Archaeological Services Inc.

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NMC 9883 Fire Insurance Plan of Ottawa, 1912

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to Pooleys Bridge, 1872

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NMC 33002 Fire Insurance Plan of Ottawa, 1898

NMC 43061 *Map of the County of Carleton, Canada West, 1863*

NMC 43177 *Plan showing Extent of Ottawa-Hull Conflagration, 1900*

NMC 104177 Fire Insurance Plan of Ottawa, 1956

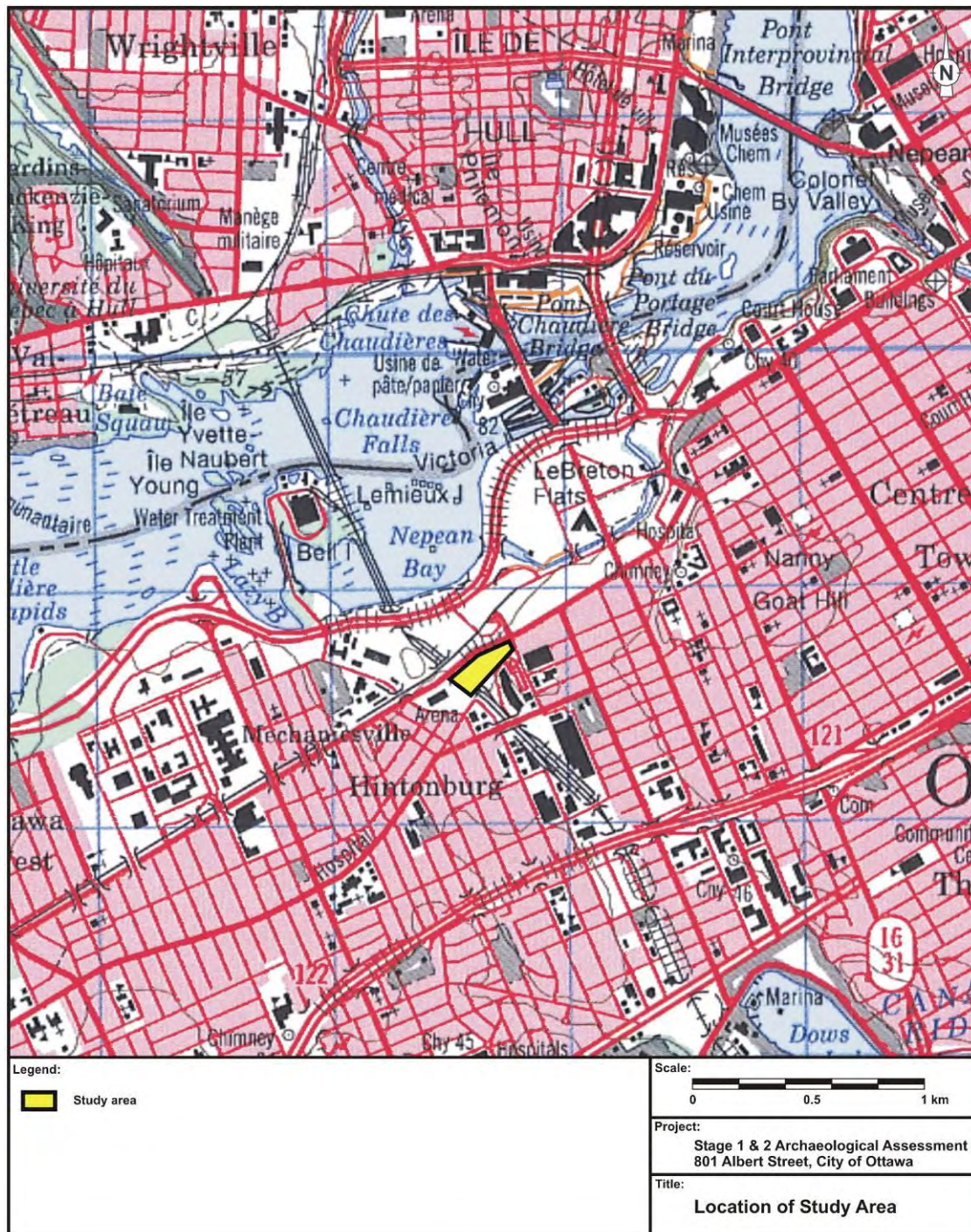
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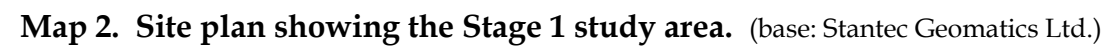
National Air Photo Library (NAPL):

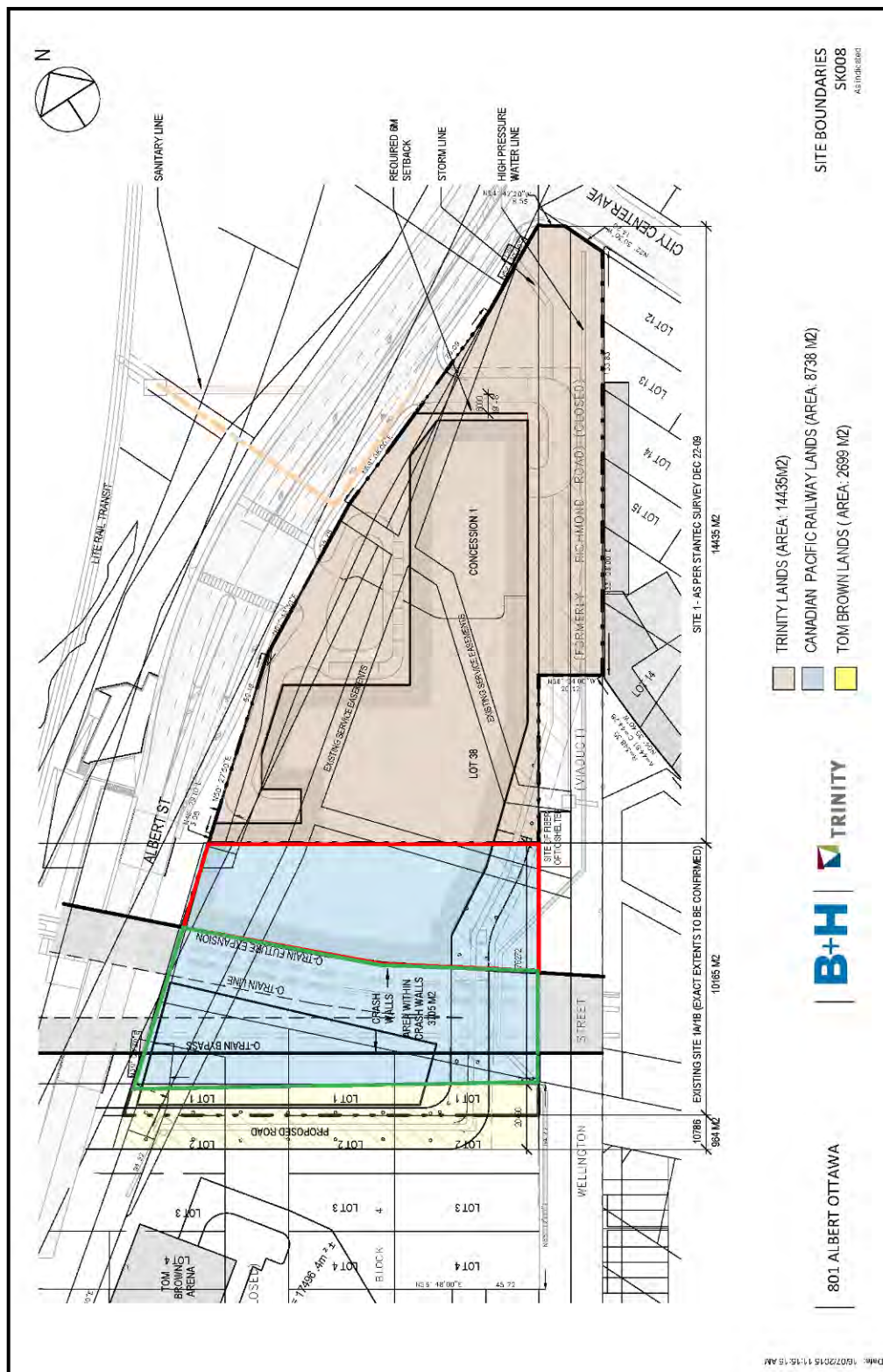
1928 Roll #A4, Photo #20

8.0 MAPS



Map 1. Location of the study area. (Eleventh edition 1:50,000 topographic sheet 31G/05 - Ottawa, 1998)

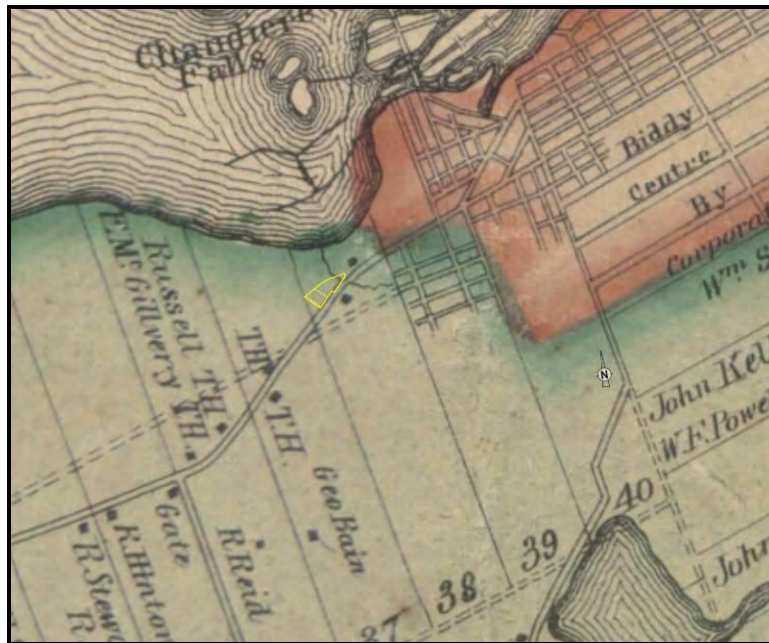




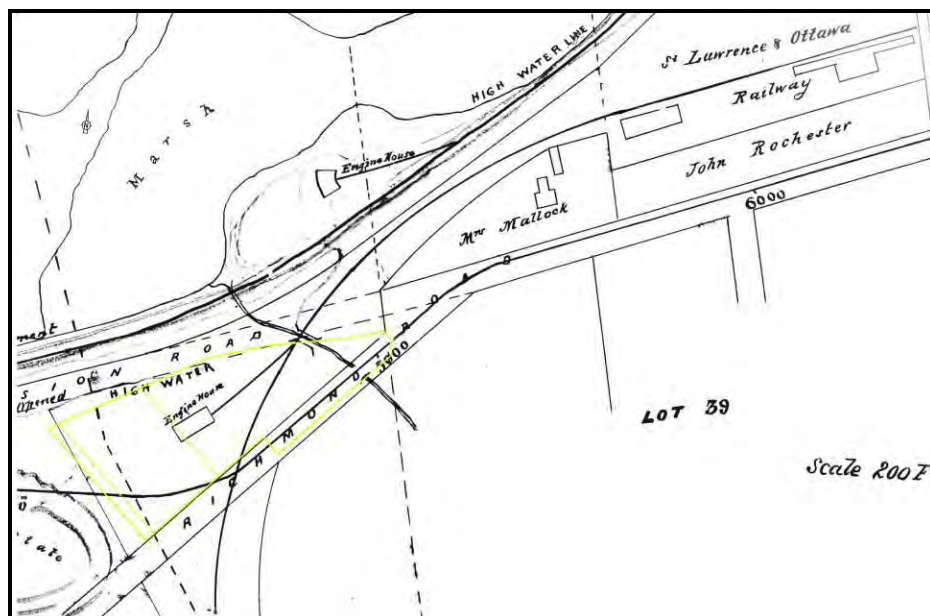
Map 3. Site plan showing the three sections of the Stage 1 study area. (Trinity Development Group Inc.)



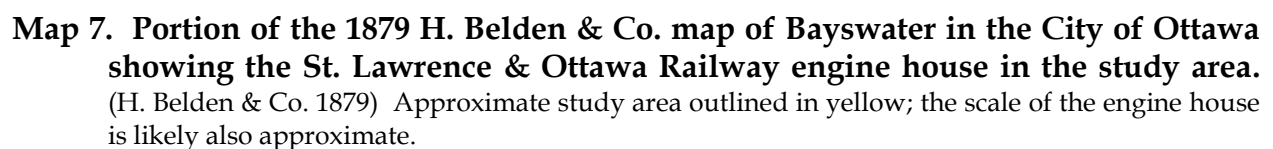
Map 4. Portion of an 1842 map of Bytown by Donald Kennedy showing the creek running through the study area on the Richmond Road leaving the settlement. (LAC NMC 19056)

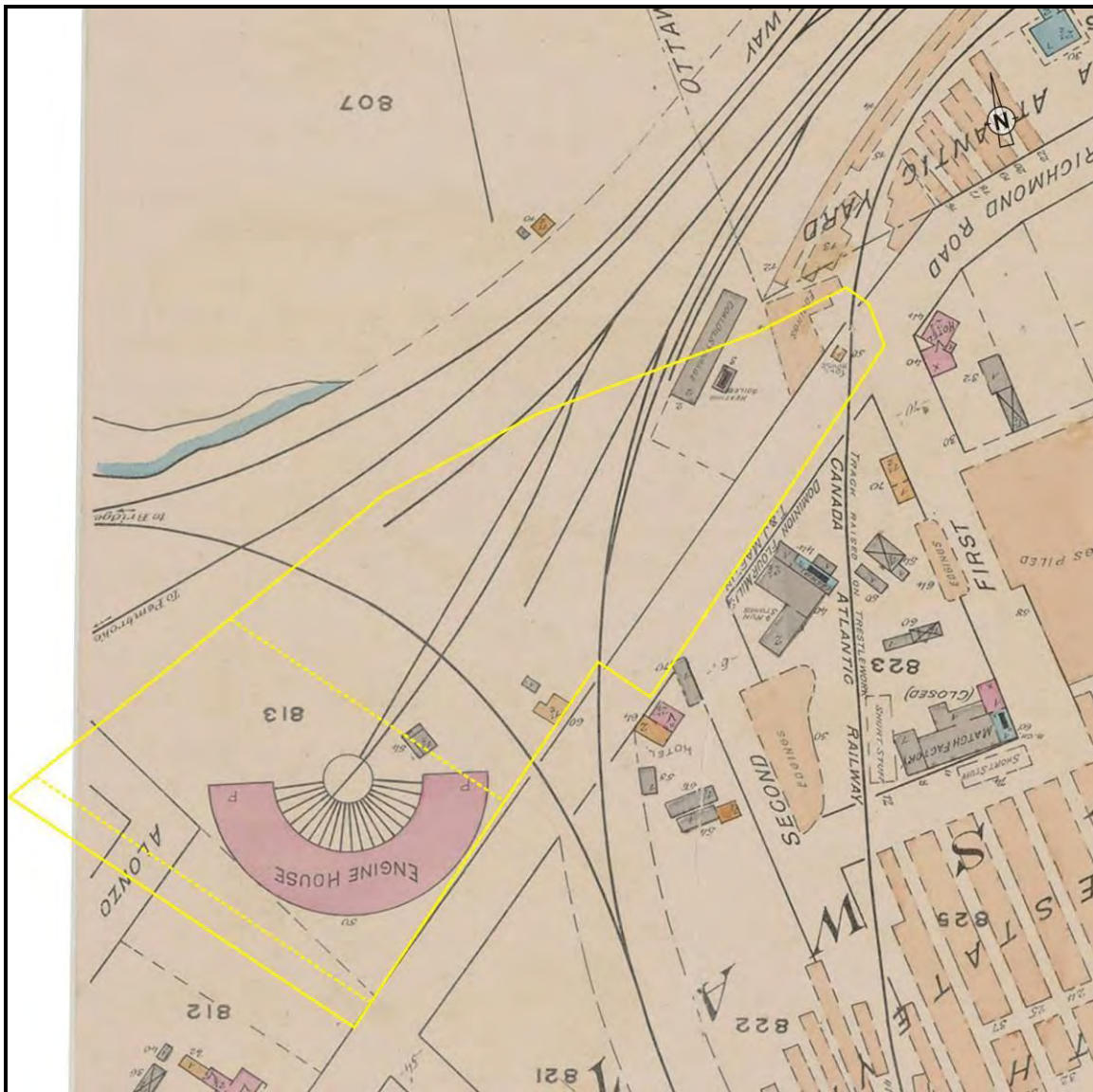


Map 5. Portion of the 1863 Walling map of Carleton County showing Richmond Road leading from the city. (LAC NMC 43061) Approximate study area outlined in yellow.

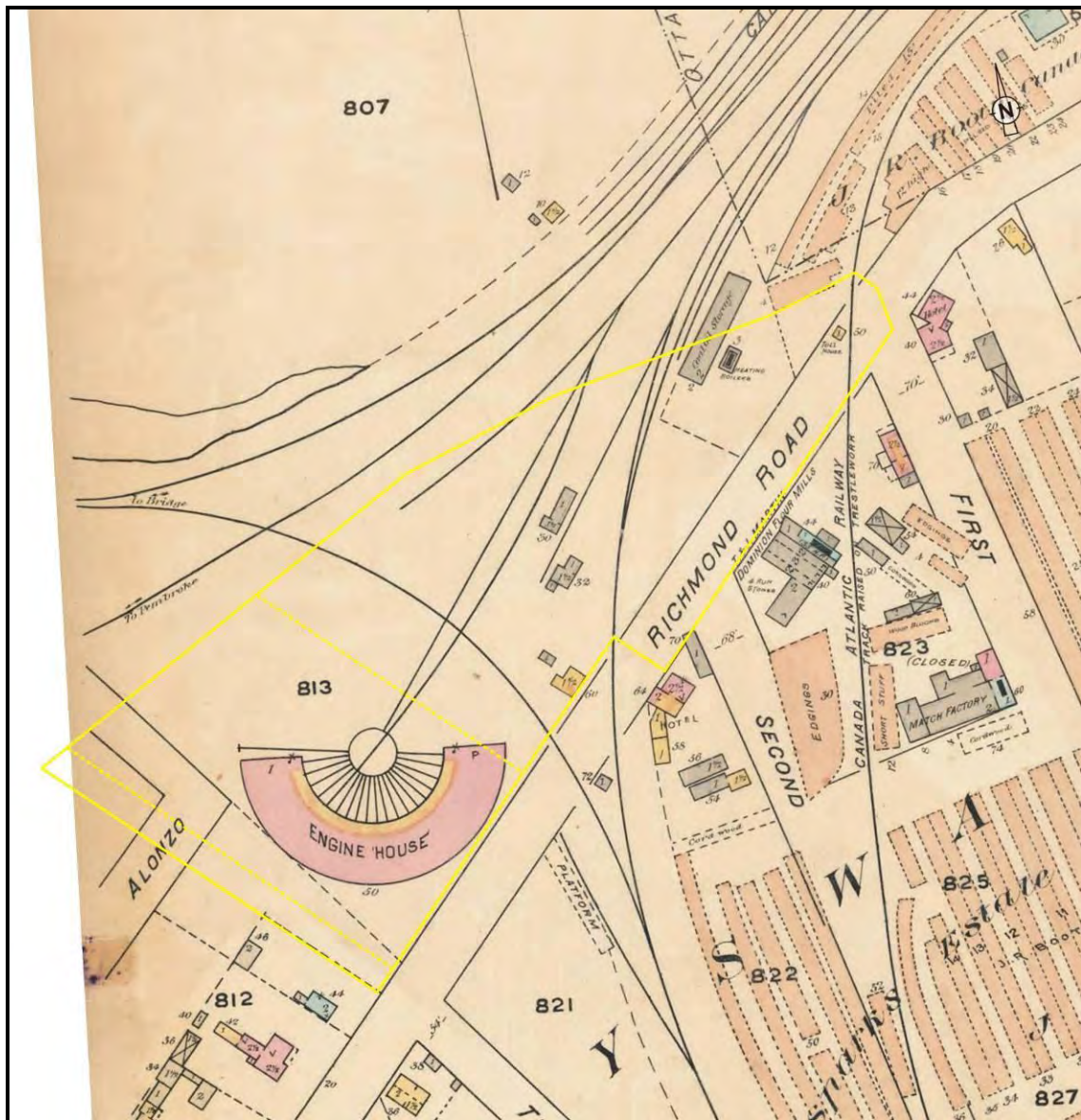


Map 6. Portion of an 1872 plan showing the railway infrastructure in the vicinity, with the St. Lawrence & Ottawa Railway engine house in the study area. (LAC NMC 19508) Approximate study area outlined in yellow; the scale of the engine house is likely also approximate.



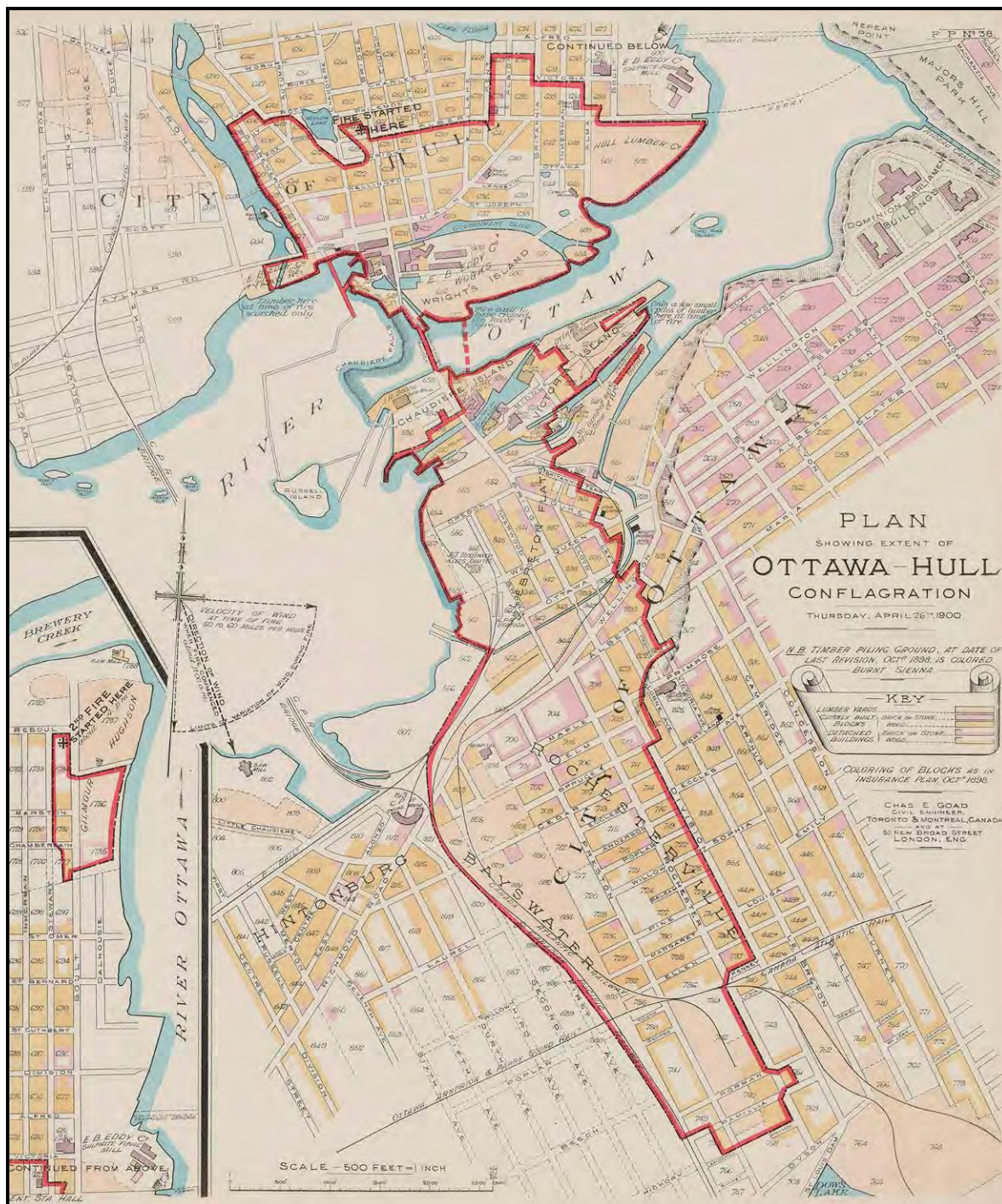


NMC 13966 - Sheet 4) Study area outlined in yellow.

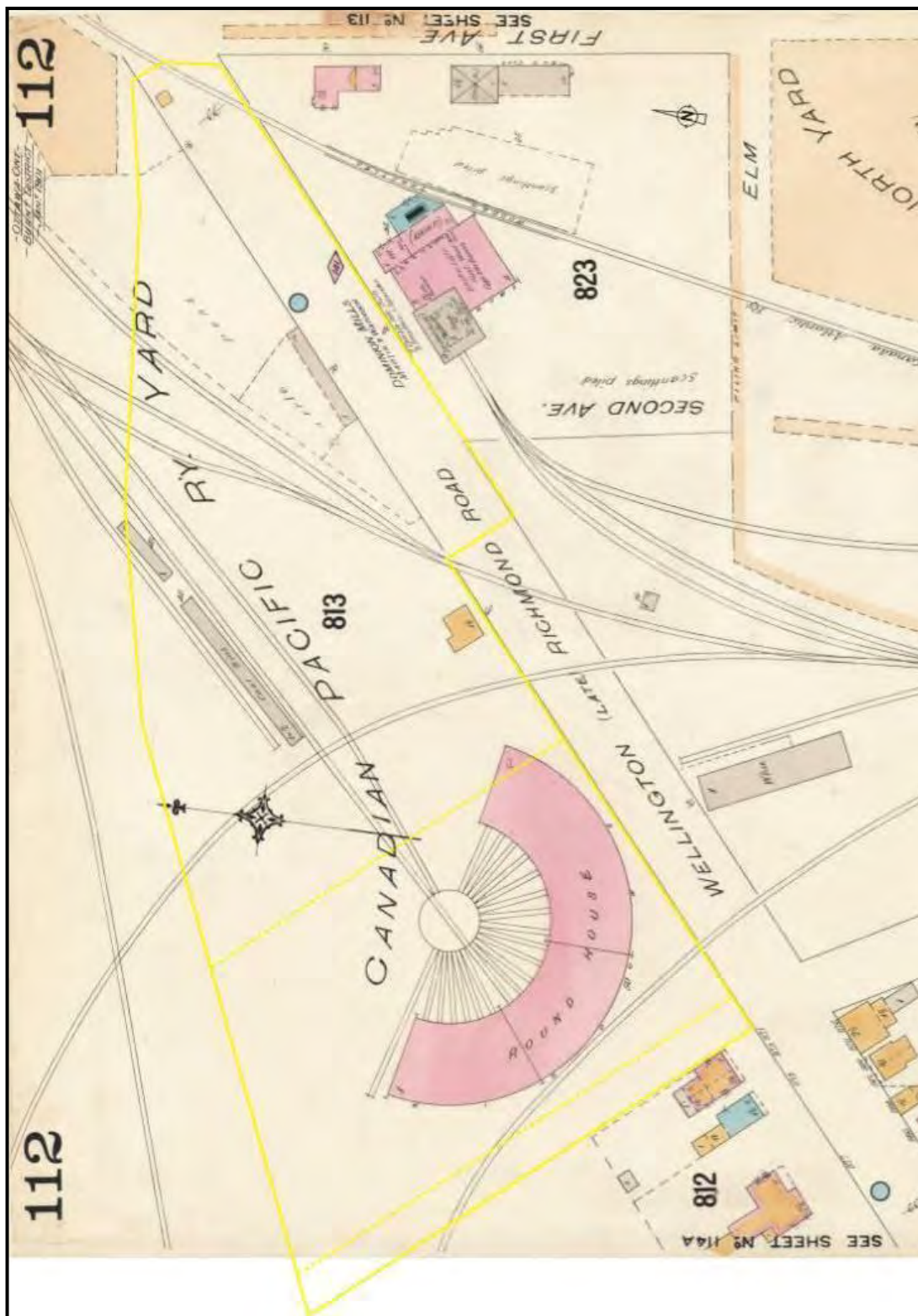


Map 9. Portion of the 1888 fire insurance plan coverage of the Bayview area. (LAC NMC 32999 - Sheet 104) Study area outlined in yellow.

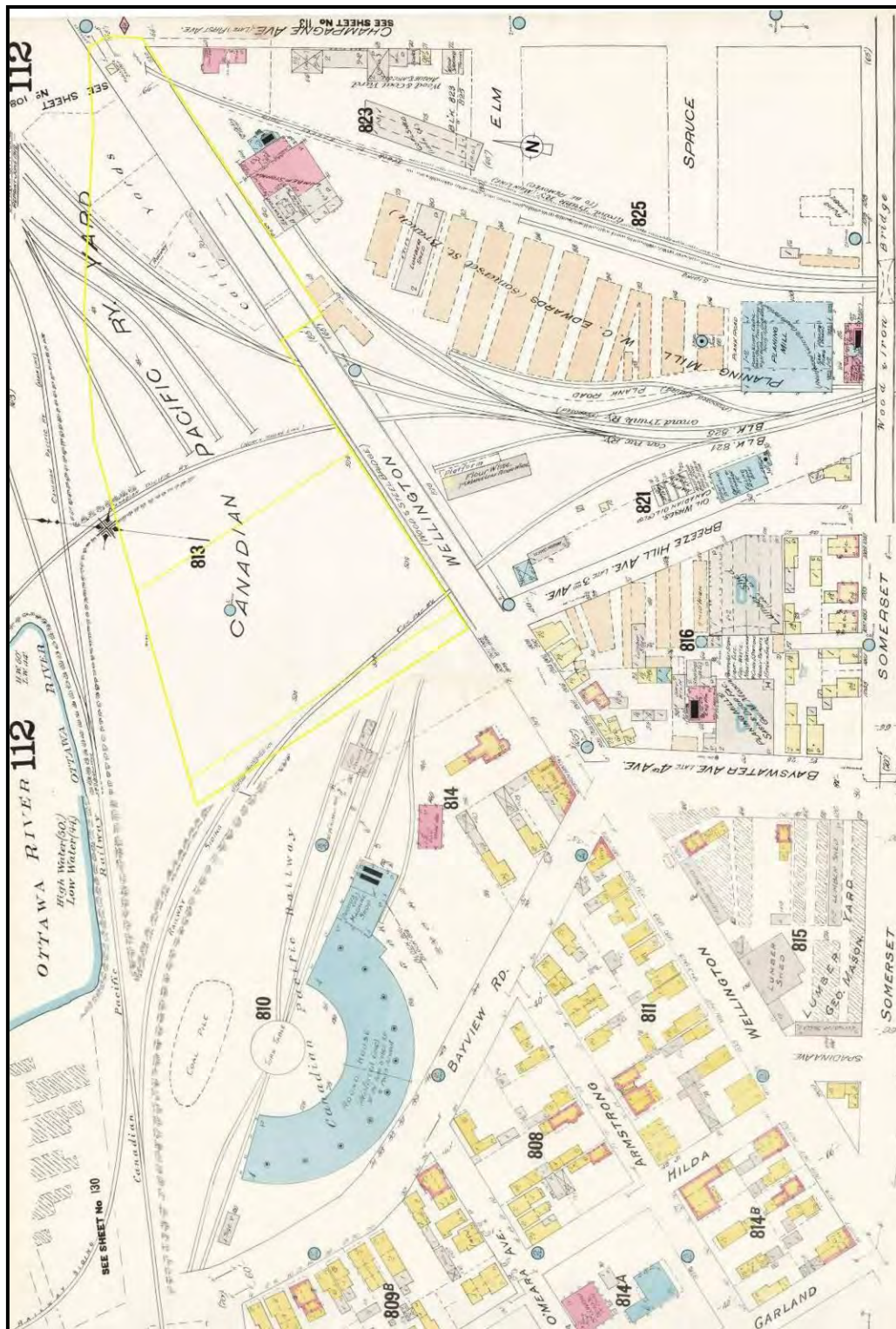




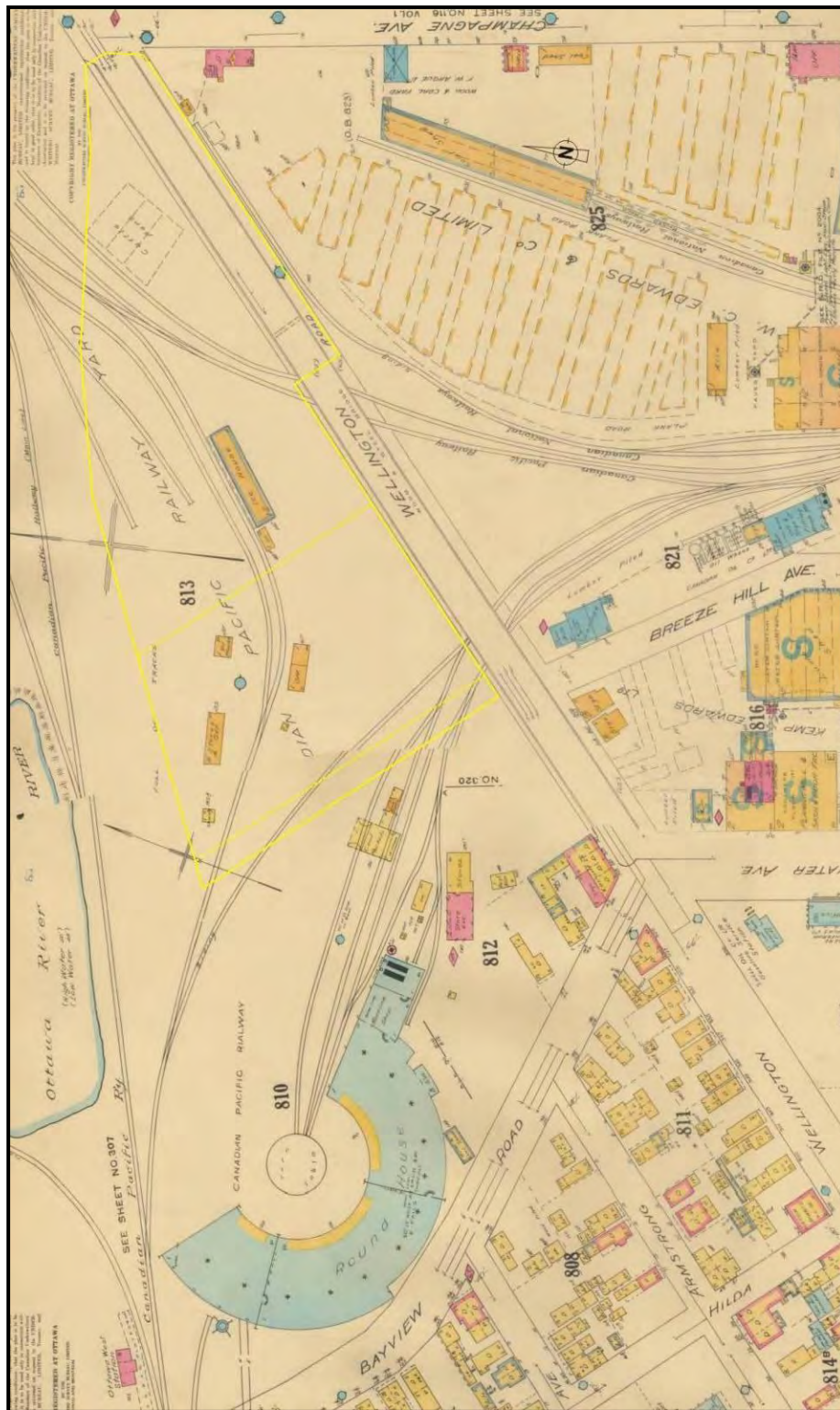
Map 11. Segment of a 1900 plan showing the extent of the Great Fire. (NMC 43177) The CPR roundhouse can be seen just on the edge of the burnt area, which appears to include the northeastern part of the study area.



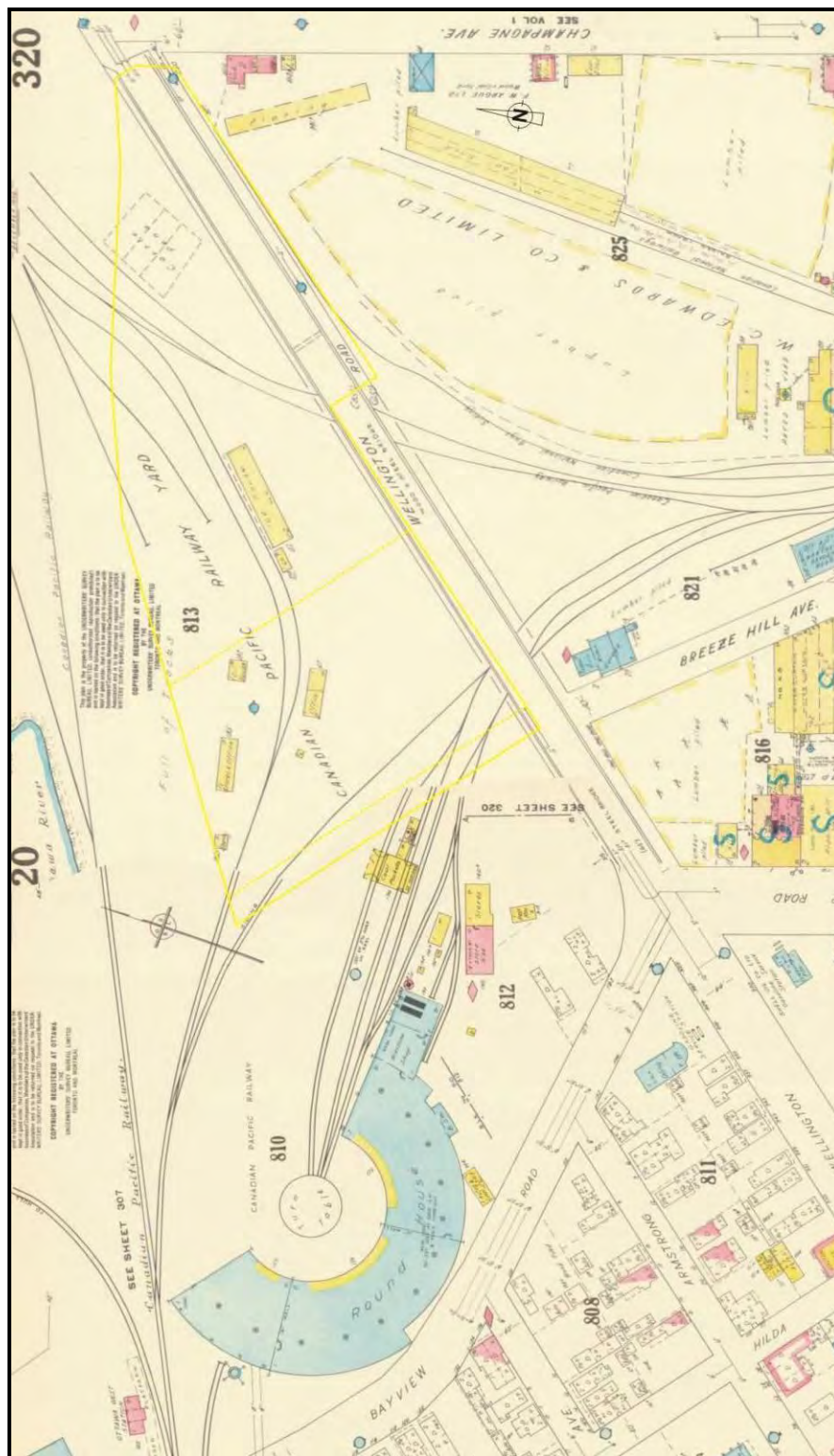
Map 12. Portion of the 1901 fire insurance plan coverage of the Bayview area. (LAC NMC 13793 - Sheet 112) Study area outlined in yellow.



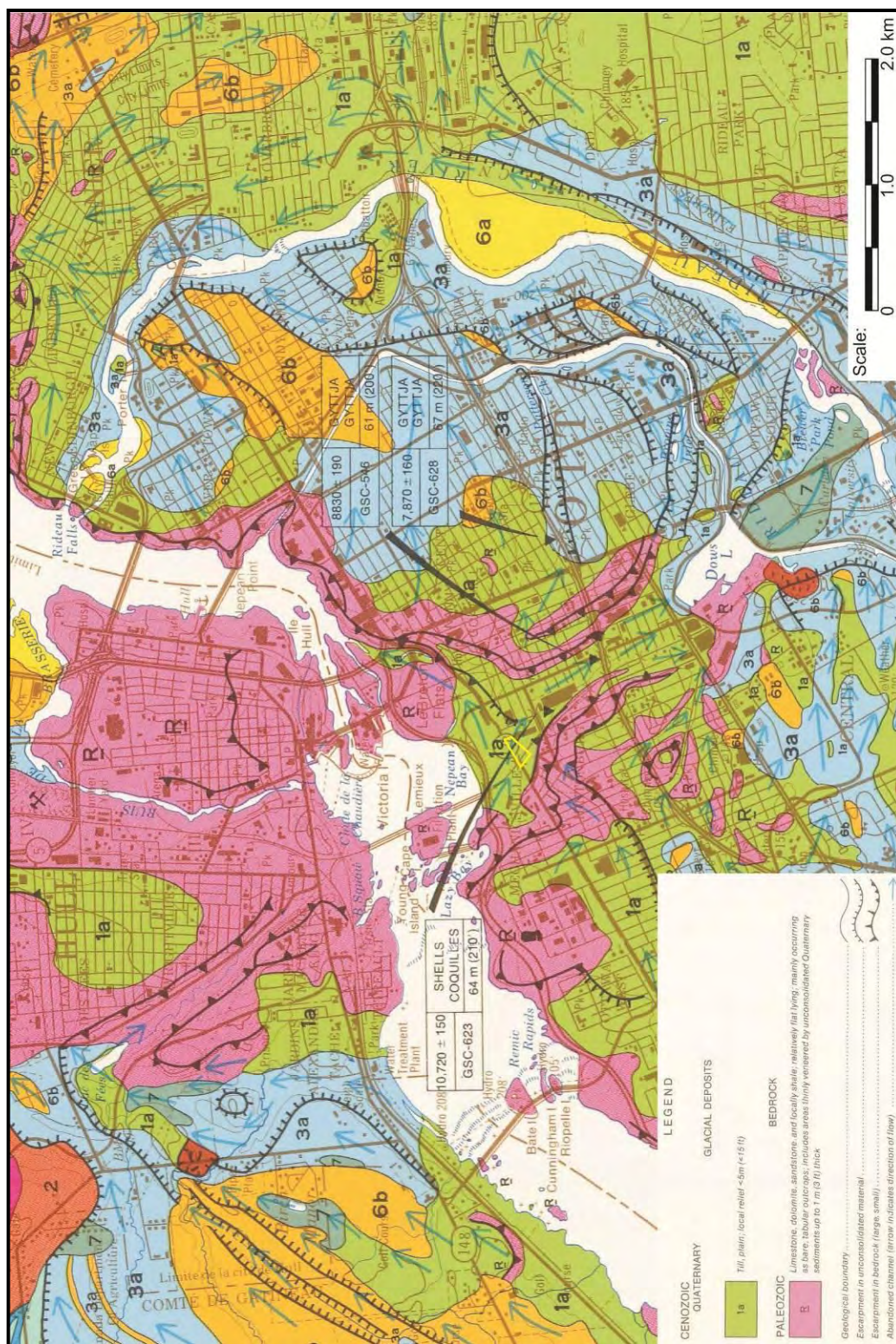
Map 13. Portion of the 1912 fire insurance plan coverage of the Bayview area. (LAC NMC 9883 – Sheet 112) Study area outlined in yellow. Note the new roundhouse to the west of the study area.



Map 14. Portion of the 1948 fire insurance plan coverage of the Bayview area. (COA - Sheet 320) Study area outlined in yellow.



Map 15. Portion of the 1956 fire insurance plan coverage of the Bayview area. (LAC NMC 104177 - Sheet 320) Study area outlined in yellow.



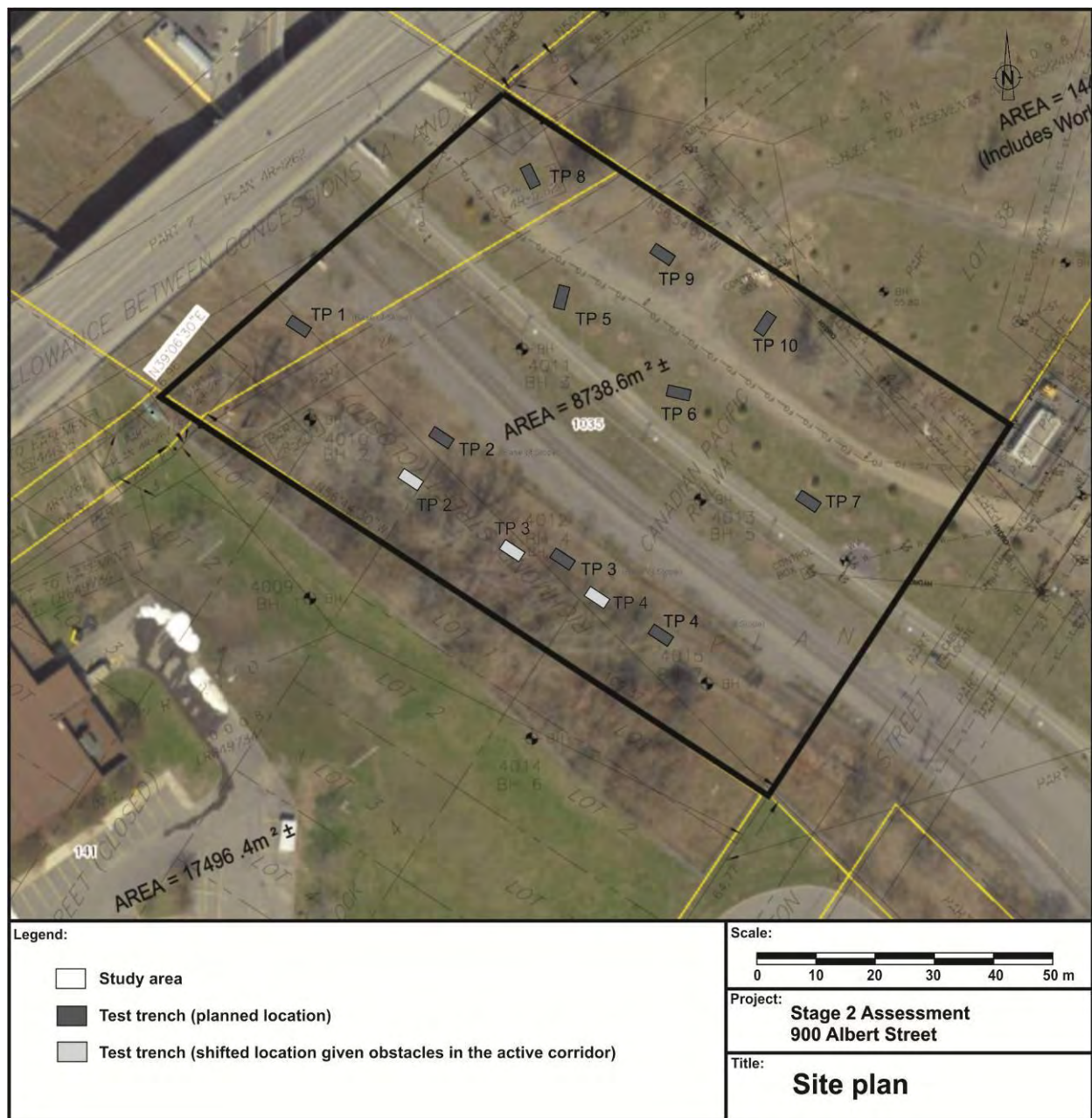
Map 16. Segment of a surficial geology map showing the study area (outlined in yellow). (GSC Map 1506A)



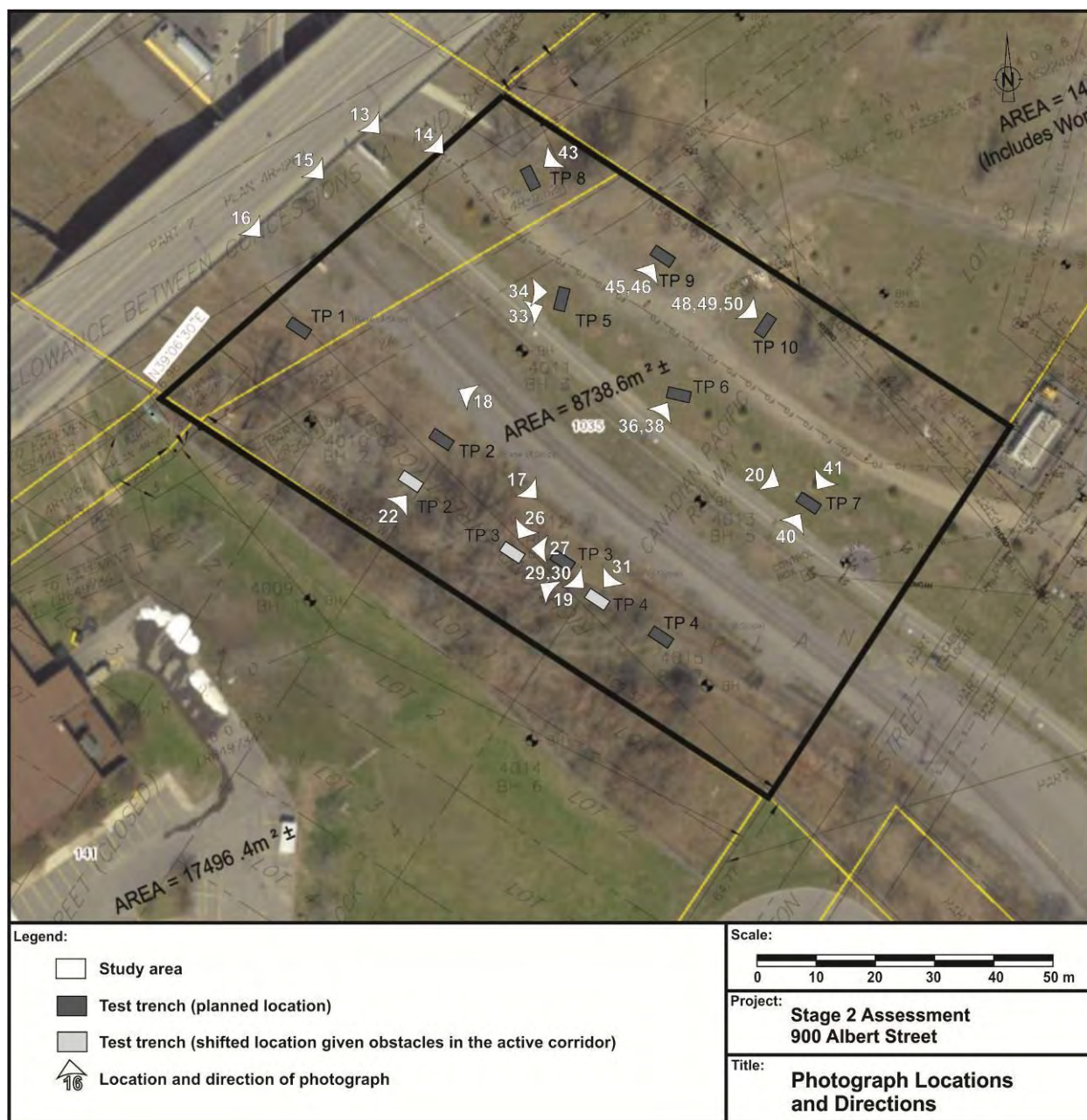
Map 17. Historical overlay showing known nineteenth and twentieth century buildings within the study area. (base: 2014 satellite image, geo-Ottawa)



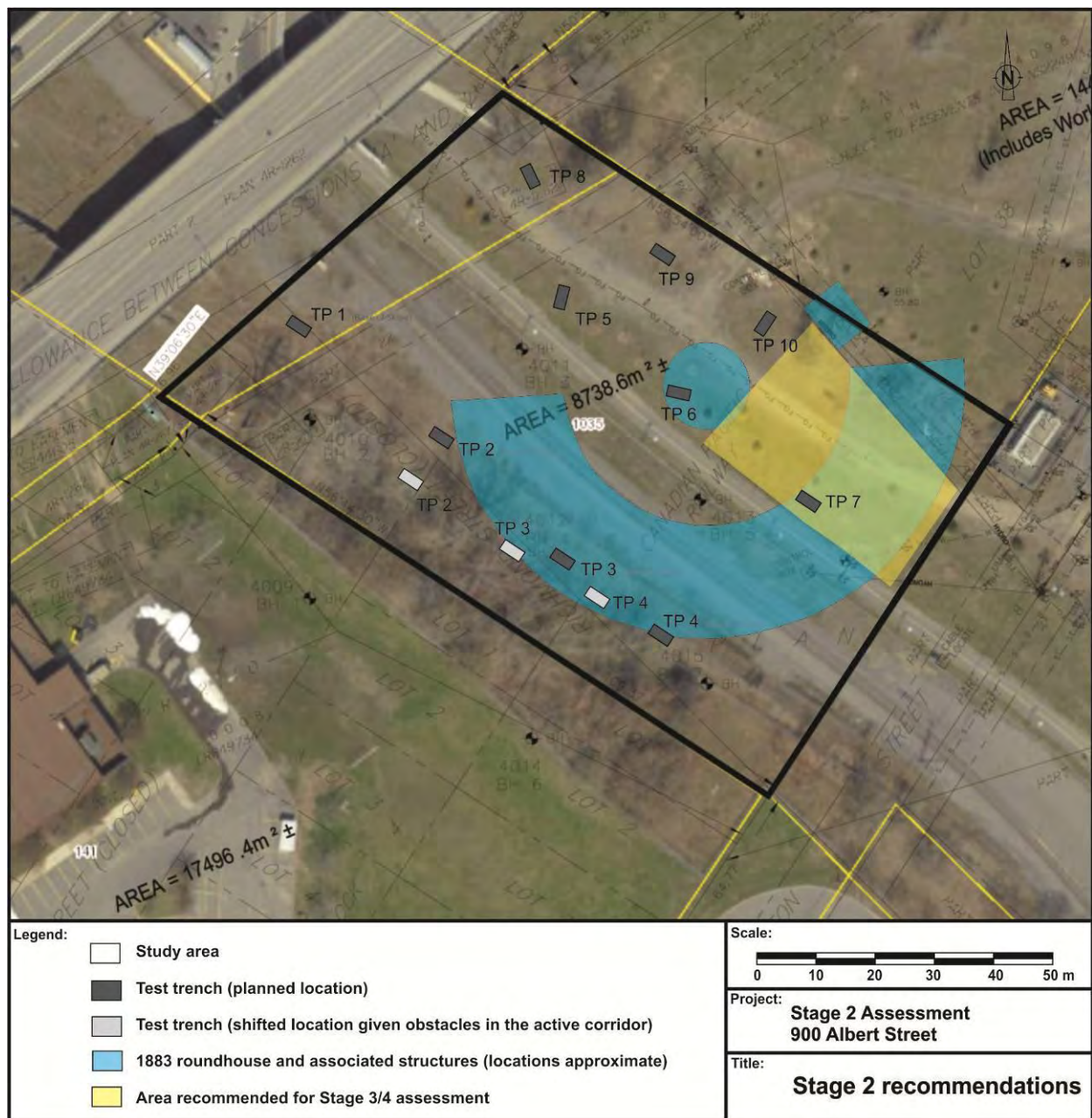
Map 18. Archaeological potential within the Stage 1 study area. (base: Stantec Geomatics Ltd.)



Map 19. Stage 2 study area and site plan. (base: 2014 satellite image, geo-Ottawa)



Map 20. Locations and directions of photographs taken during the Stage 2 assessment and referenced in Section 4.0 of this report. (base: 2014 satellite image, geo-Ottawa) Numbers refer to images numbers in Section 9.0.



Map 21. Area recommended for Stage 3/4 assessment. (base: 2014 satellite image, geo-Ottawa)

9.0 IMAGES

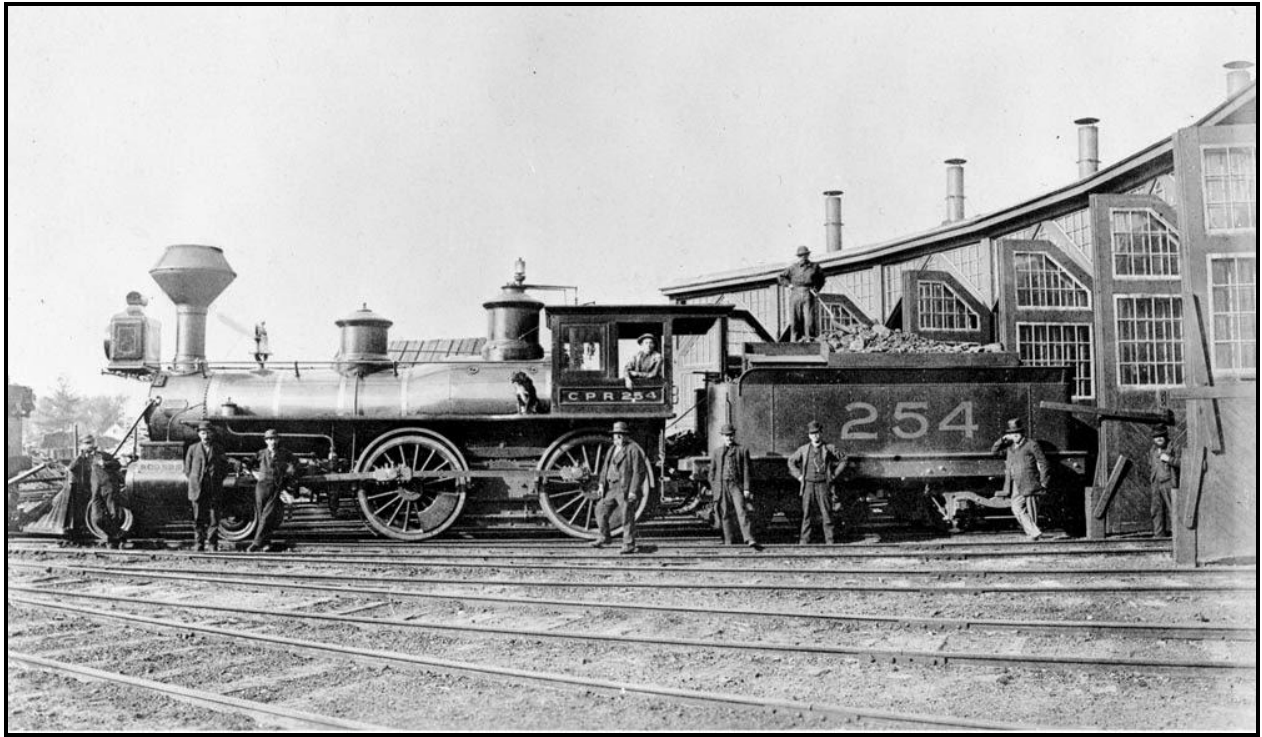


Image 1. The new CPR roundhouse at Bayswater, 1884. (LAC PA-203972)

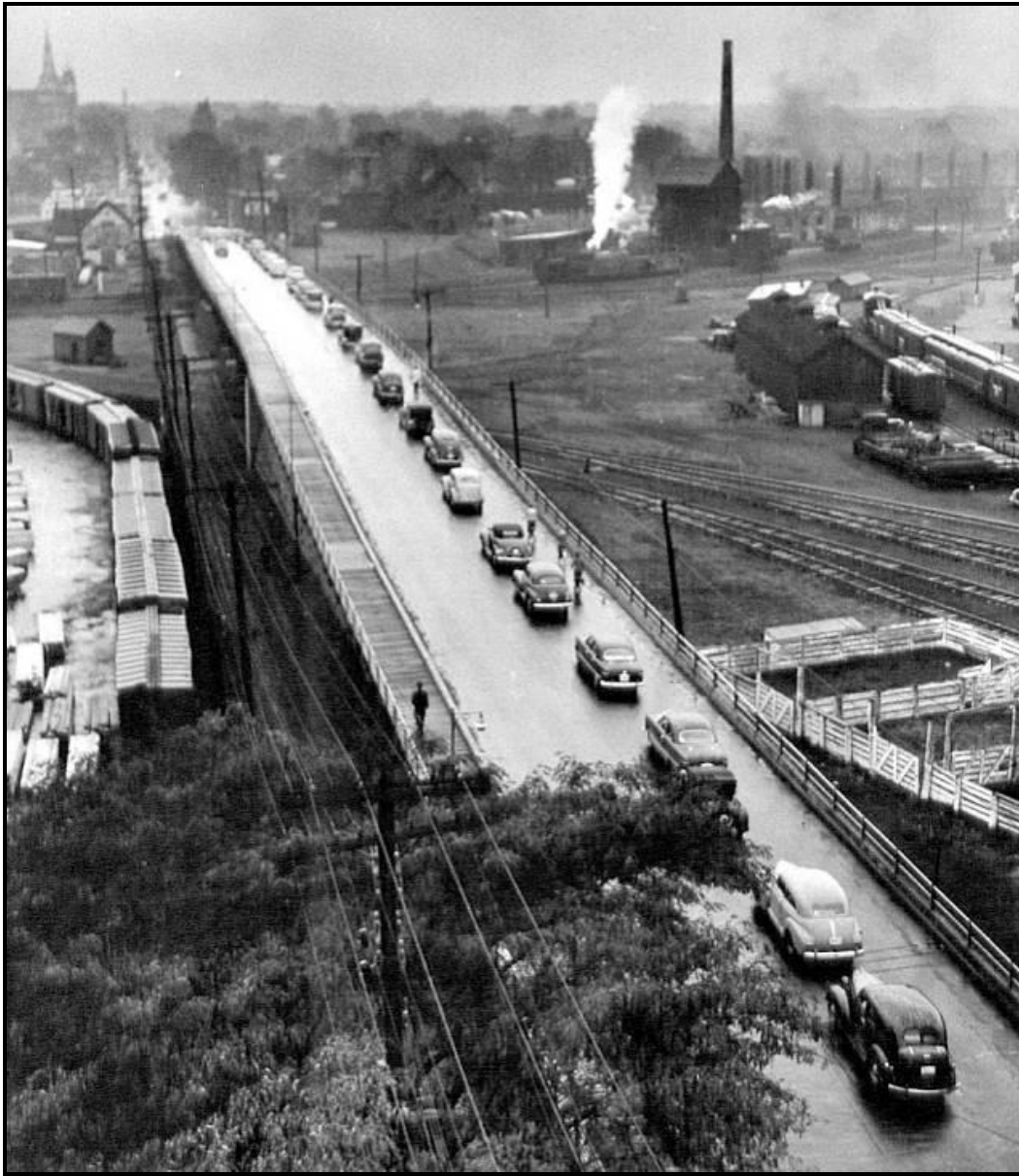


Image 2. The Wellington Street viaduct looking west. (<http://urbsite.blogspot.ca/2012/11/wellington-viaduct-scott-street.html>) Several railway structures can also be seen to the north of the viaduct in this photograph, including the cattle pens at right with the ice house and offices further west and the complex surrounding the 1911 roundhouse in the distance.

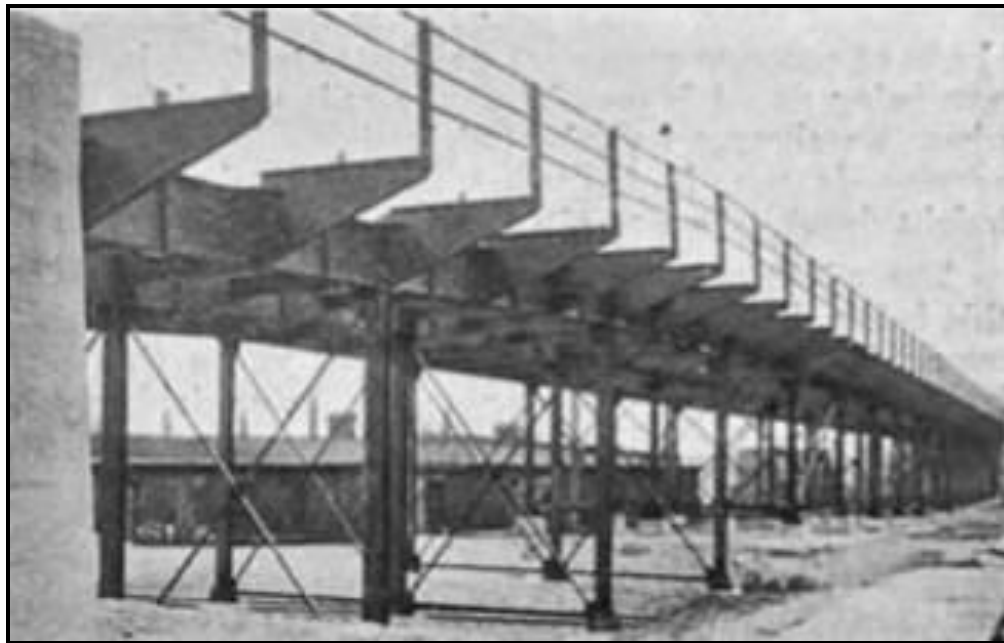


Image 3. The central steel section of the Wellington Street viaduct under construction, 1909. (*The Contract Record* 1910, Vol. 24, No.6:36-37). The 1883 CPR roundhouse can be seen on the opposite side of the viaduct.



Image 4. One of the approaches to the Wellington Street viaduct under construction, 1909. (*The Contract Record* 1910, Vol. 24, No.6:36-37).



Image 5. Aerial photograph showing the study area in 1928. (NAPL A4-20) Study area outlined in yellow.



Image 6. Oblique aerial photograph showing the study area in the mid-twentieth century with the Wellington Street viaduct to the right, looking northeast. (COA, no reference)

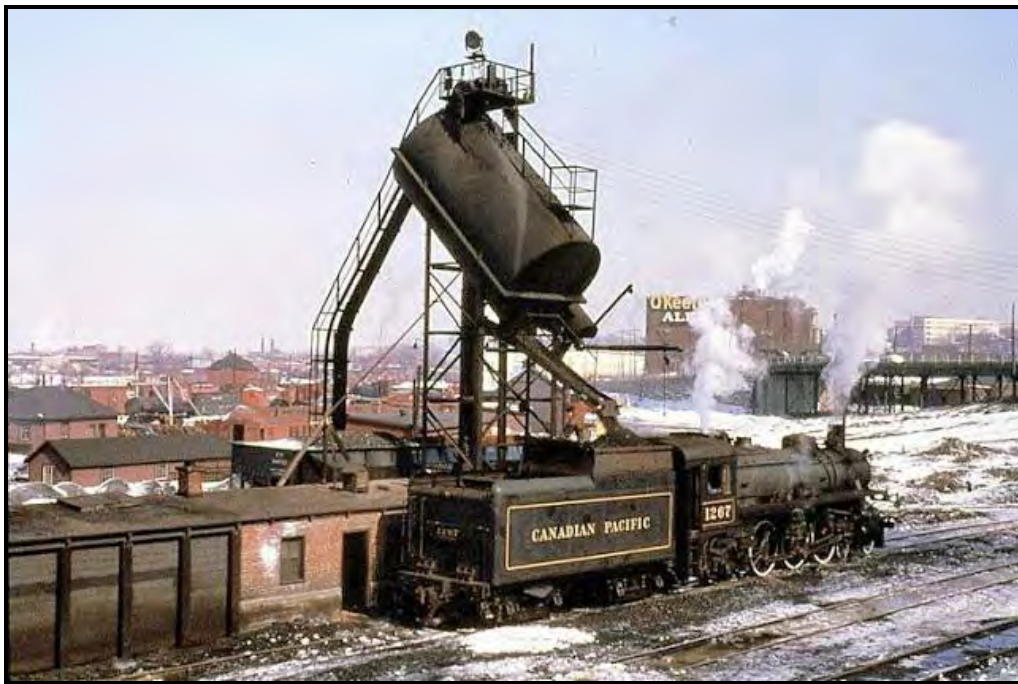


Image 7. The coal hopper near the 1911 roundhouse with the CPR office buildings in the background, facing east. (<http://urbsite.blogspot.ca/2012/05/cpr-ottawa-west-roundhouse-remembered.html>)



Image 8. The cattle pens in the mid-twentieth century, facing north. (<http://urbsite.blogspot.ca/2012/05/cpr-ottawa-west-roundhouse-remembered.html>)



Image 9. The CPR office buildings and ice house in the mid-twentieth century, facing east. (<http://urbsite.blogspot.ca/2012/05/cpr-ottawa-west-roundhouse-remembered.html>)



Image 10. Oblique aerial photograph showing the study area in the early 1960s with the 1911 roundhouse in the foreground, looking east. (COA, no reference)

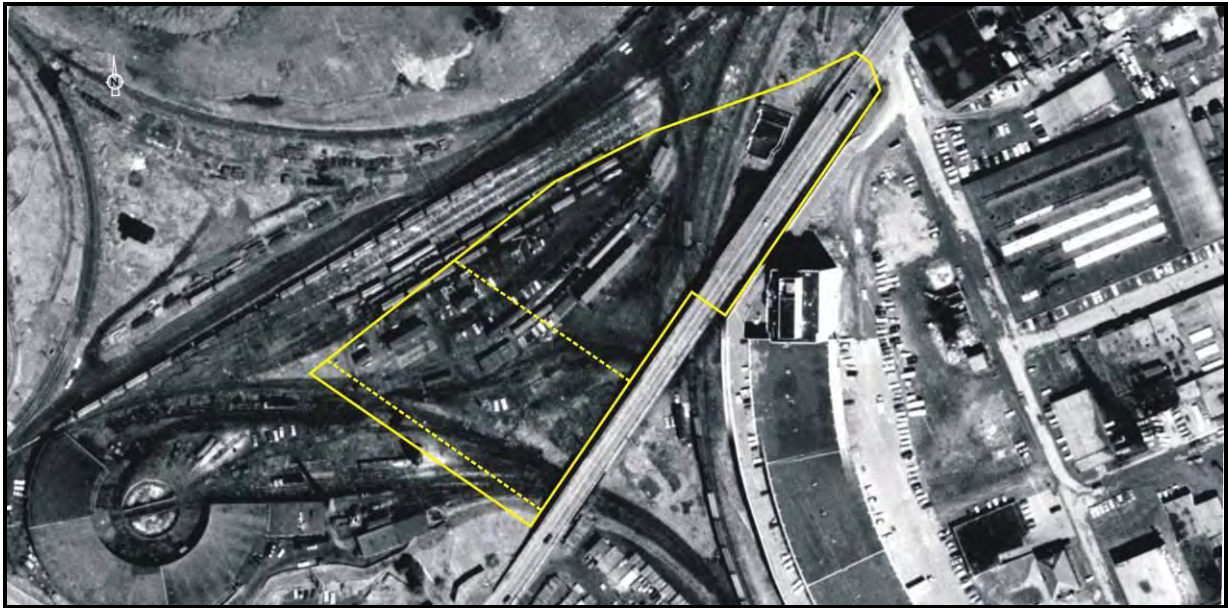


Image 11. Aerial photograph showing the study area in 1965. (geo-Ottawa) Study area outlined in yellow.



Image 12. The general study area following the removal of the CPR buildings in 1968 from the Wellington Street Viaduct showing trunk sewer construction, facing north. (<http://urbsite.blogspot.ca/2012/05/cpr-ottawa-west-roundhouse-remembered.html>)



Image 13. The northeast section of the Stage 2 study area from the Albert/Scott Street overpass showing recent landscaping, temporary parking areas and scrub, facing southeast. (PR15-41D055) The trees mark the northeastern edge of the Stage 2 study area.



Image 14. The northeast section of the Stage 2 study area from the Champagne MUP showing recent landscaping, temporary parking areas, scrub and the temporary contractors' compound, facing southeast. (PR15-41D057)

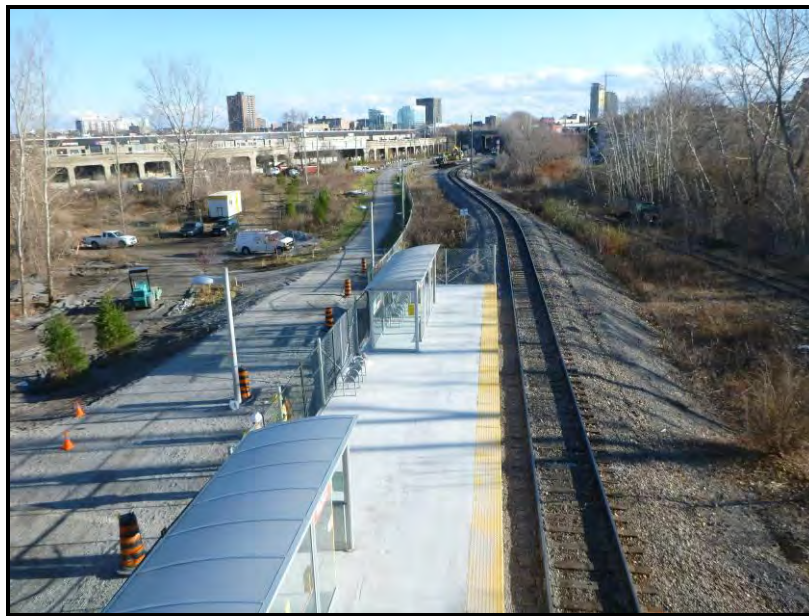


Image 15. The central section of the Stage 2 study area from the Albert/Scott Street overpass showing the Champagne MUP (left) and the O-Train line (right), facing southeast. (PR15-41D054)



Image 16. The southwest section of the Stage 2 study area from the Albert/Scott Street overpass showing the abandoned rail line next to the O-Train line and the wooded slope up to the Tom Brown Arena lands, facing southeast. (PR15-41D052)



Image 17. The abandoned CPR spur line to the southwest of the O-Train line, facing southeast. (PR15-41D001) Note the limited space between the track and the active rail corridor boundary fence.



Image 18. Extensive recent fill within the active rail corridor abutting the proposed location of Test Trench 1, facing northwest. (PR15-41D161)



Image 19. Crew monitoring the mechanical excavation of Test Trench 3, facing northwest. (PR15-41D011)



Image 20. Crew recording Test Trench 7, facing southeast. (PR15-41D137)

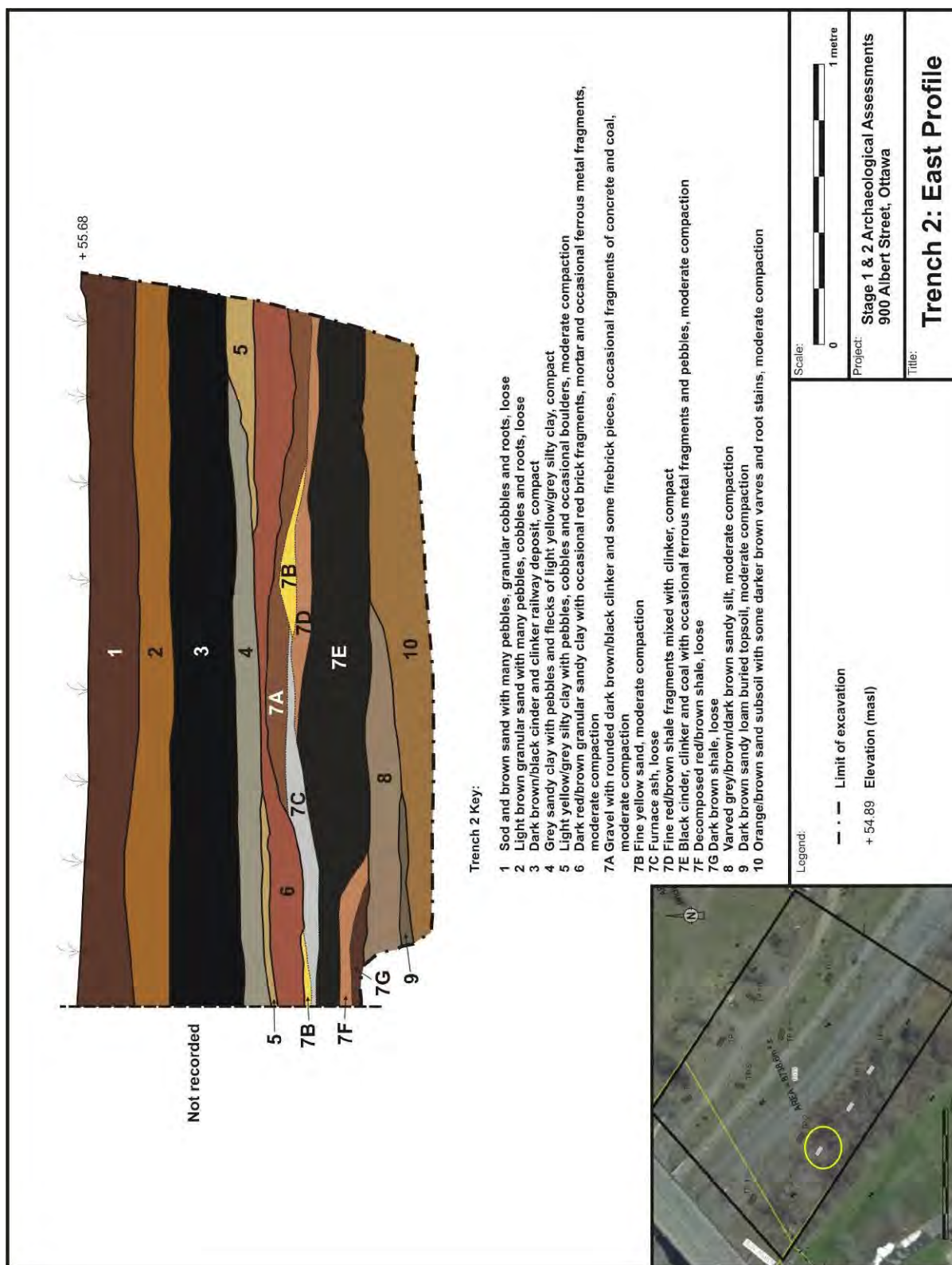


Image 21. Test Trench 2: east profile.



Image 22. Completed Test Trench 2 showing railway deposits and buried topsoil, facing northeast. (PR15-41D040)



Image 23. Carriage spring recovered from Lot 7 in Test Trench 2. (PR15-41D044)

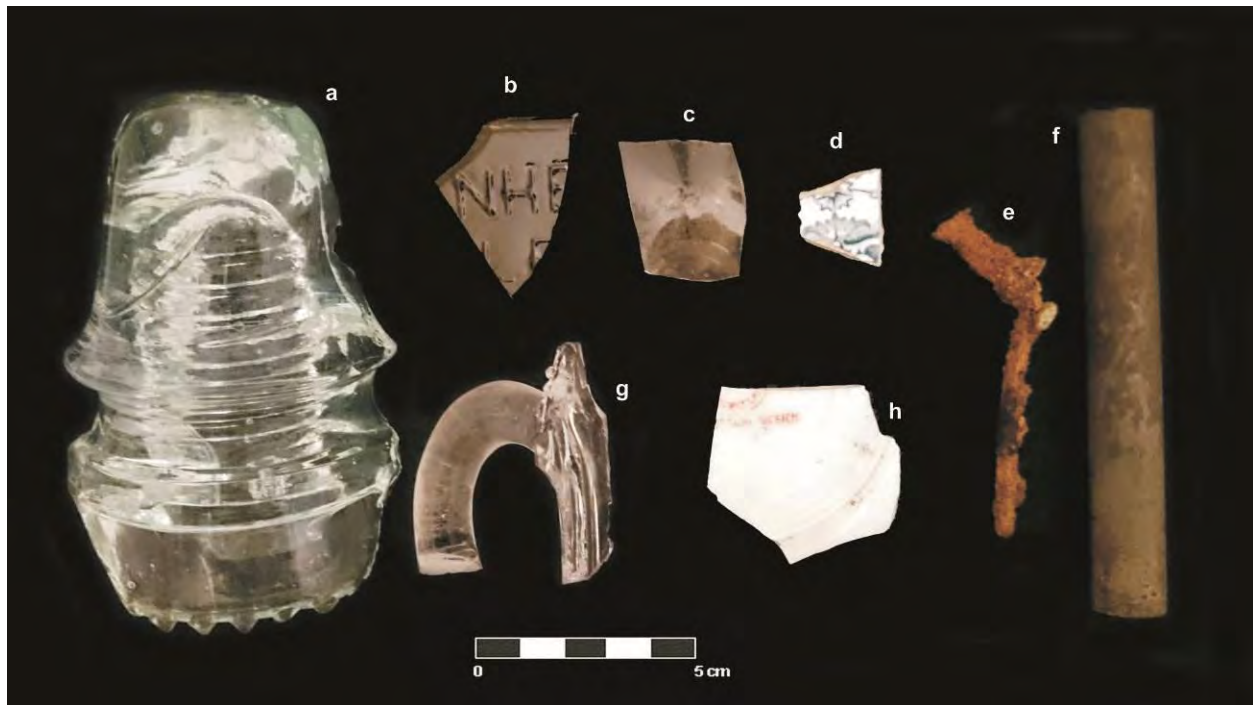


Image 24. Sample artifacts found during the Stage 2 assessment.

a: mould blown exterior electrical insulator, Test Trench 10, Lot 8 (#0022); b: mould blown gin bottle manufactures by Blankenheim & Nolet, Test Trench 10, Lot 8 (#0020); c: oil lamp chimney or large light bulb, Trench 6, Lot 11 (#0006); d: turquoise transfer printed refined white earthenware tableware, Test Trench 10, Lot 8 (#0016); e: machine cut nail, Test Trench 10, Lot 8 (#0026); f: arc lamp carbon rod, Test Trench 10, Lot 10 (#0007); g: machine made glass tableware handle, Test Trench 10, Lot 8 (#0018); h: vitrified white earthenware plate with a partial maker's mark possibly indicating a post-1895 manufacture date, Test Trench 2, Lot 7 (#0031)

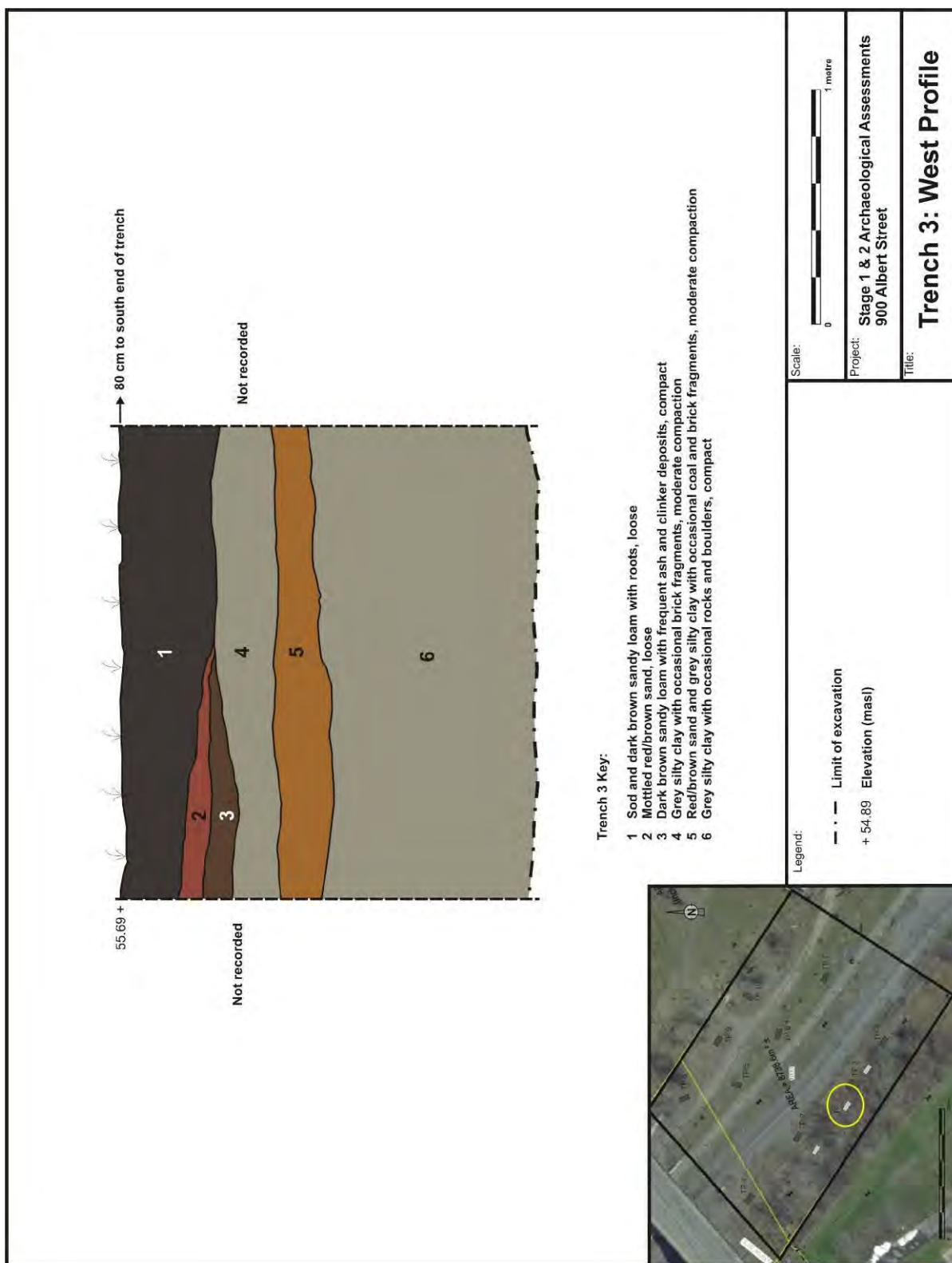


Image 25. Test Trench 3: west profile.



Image 26. Test Trench 3 showing the demolition layer (Lot 5) between deposits of silty clay, facing southwest. (PR15-41D016)



Image 27. Test Trench 3 showing the depth of the lower silty clay deposit (Lot 6), facing west. (PR15-41D046)

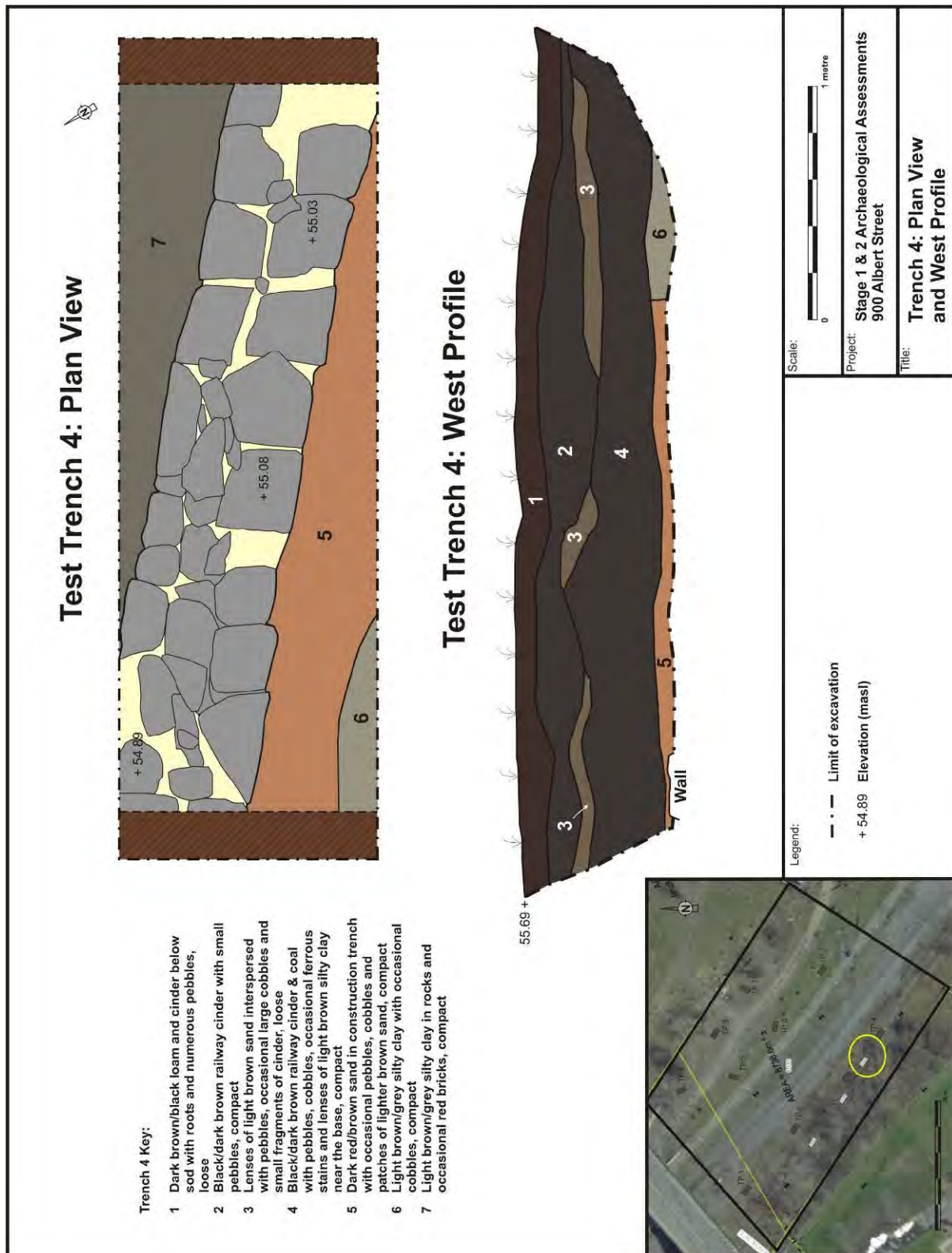


Image 28. Test Trench 4: plan view and west profile.



Image 29. Test Trench 4 during excavation showing previous rail tie locations in Lot 4, looking southeast. (PR15-41D166)



Image 30. Trench 4 completed showing the 1883 roundhouse foundation wall, facing southeast. (PR15-41D031)



Image 31. Trench 4 completed showing later railway deposits above the 1883 roundhouse foundation wall, facing southwest. (PR15-41D034)

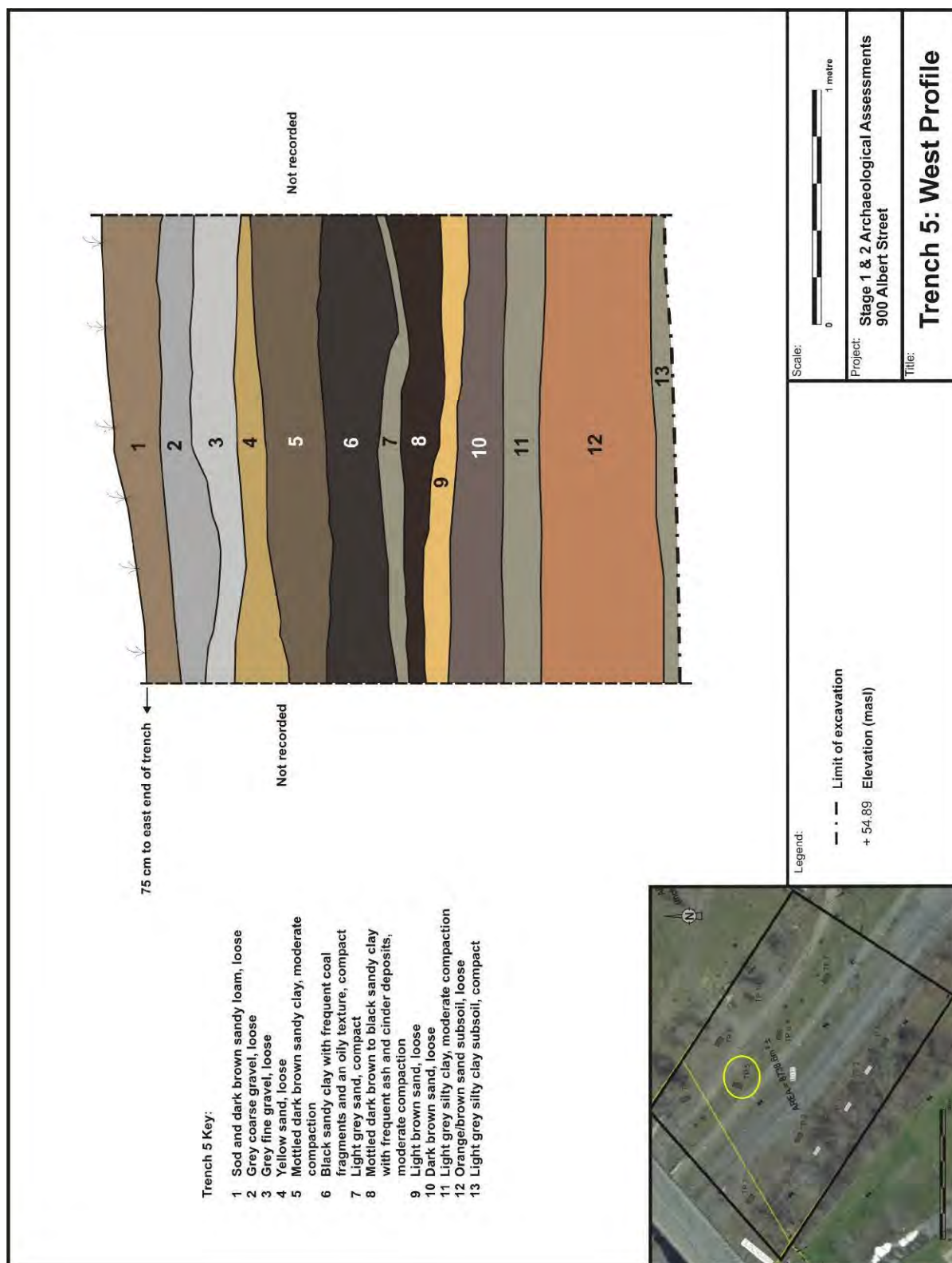


Image 32. Test Trench 5: west profile.



Image 33. Trench 5 showing railway deposits below substantial late twentieth century fill, facing northeast. (PR15-41D142)



Image 34. Trench 5 completed showing possible buried original topsoil (Lot 10), facing east. (PR15-41D146)





Image 36. Trench 6 during excavation showing some of the demolition debris in Lot 12, facing northeast. (PR15-41D122)



Image 37. Complete red brick found in Lot 10 during the excavation of Trench 6. (PR15-41D128)



Image 38. Trench 6 completed showing the in situ wooden beam in Lot 13, facing northeast. (PR15-41D134)

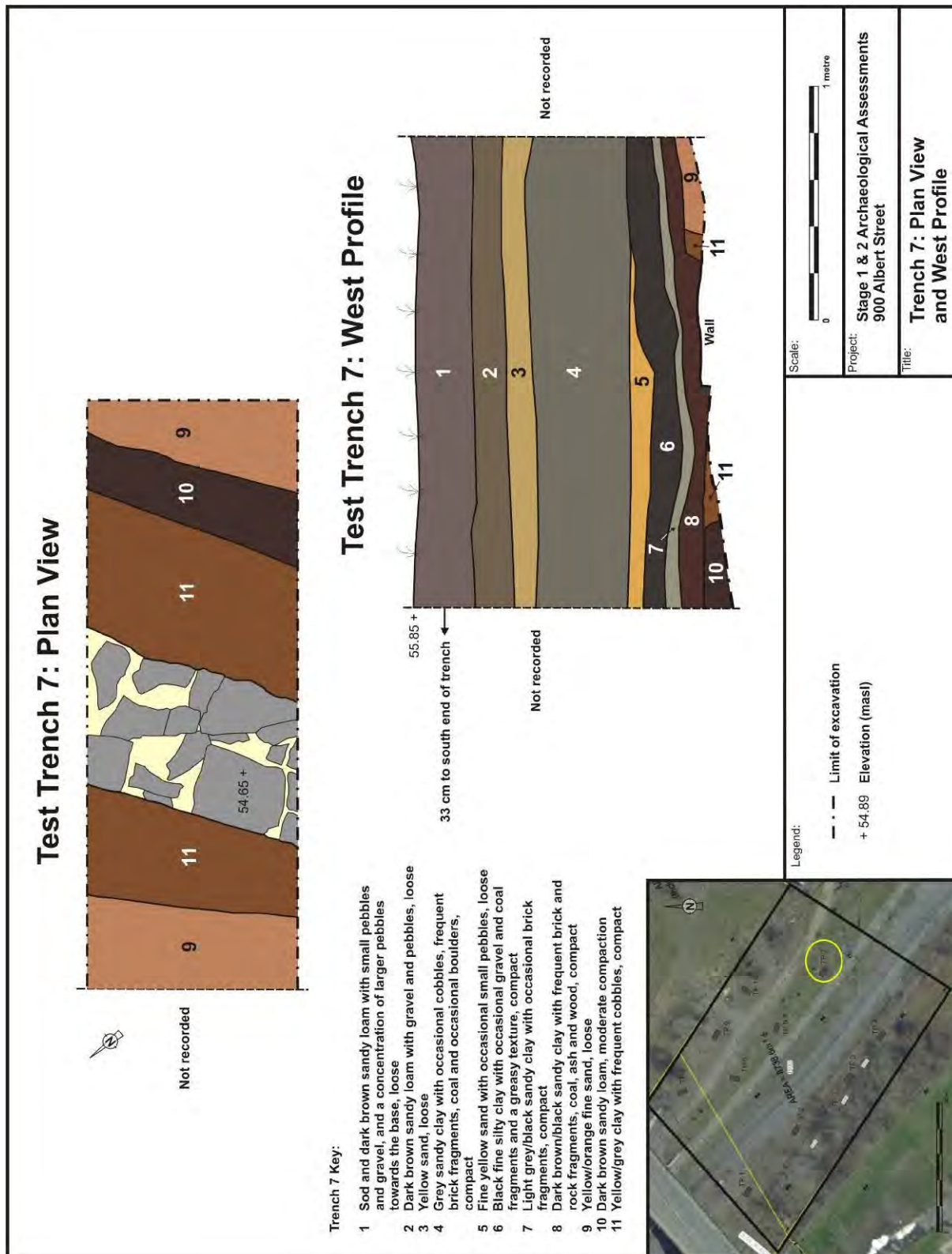


Image 39. Test Trench 7: plan view and west profile.



Image 40. Trench 7 completed showing the 1883 roundhouse foundation wall, facing northeast. (PR15-41D118)



Image 41. Trench 7 completed showing later railway deposits above the 1883 roundhouse foundation wall, facing southwest. (PR15-41D121)

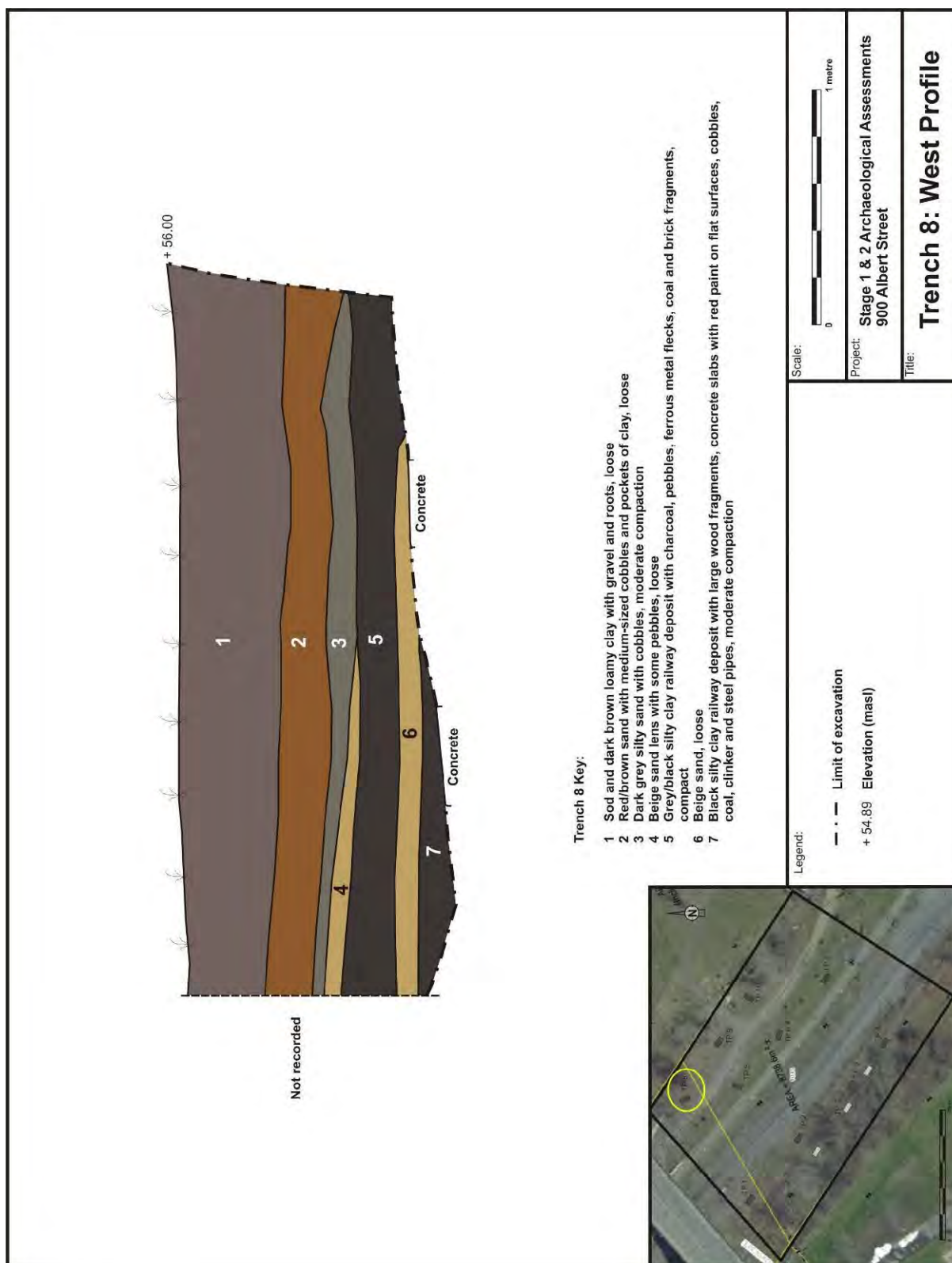


Image 42. Test Trench 8: west profile.



Image 43. Trench 8 completed showing concrete slabs below railway material, facing southwest. (PR15-41D093)

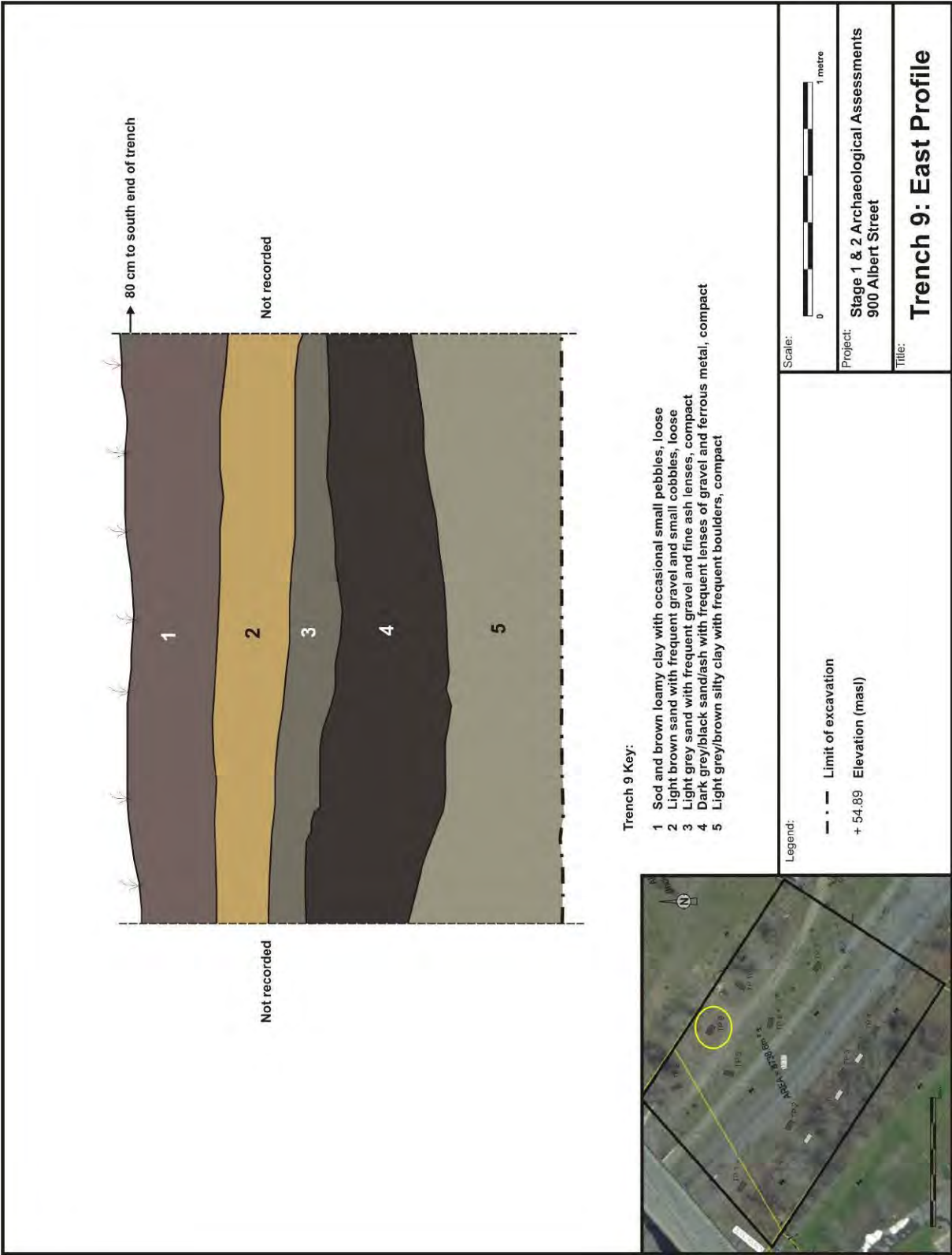


Image 44. Test Trench 9: east profile.



Image 45. Trench 9 during excavation showing the former railway surface, facing northeast. (PR15-41D087)



Image 46. Trench 9 completed showing silty clay subsoil below the railway deposits, facing northeast. (PR15-41D106)

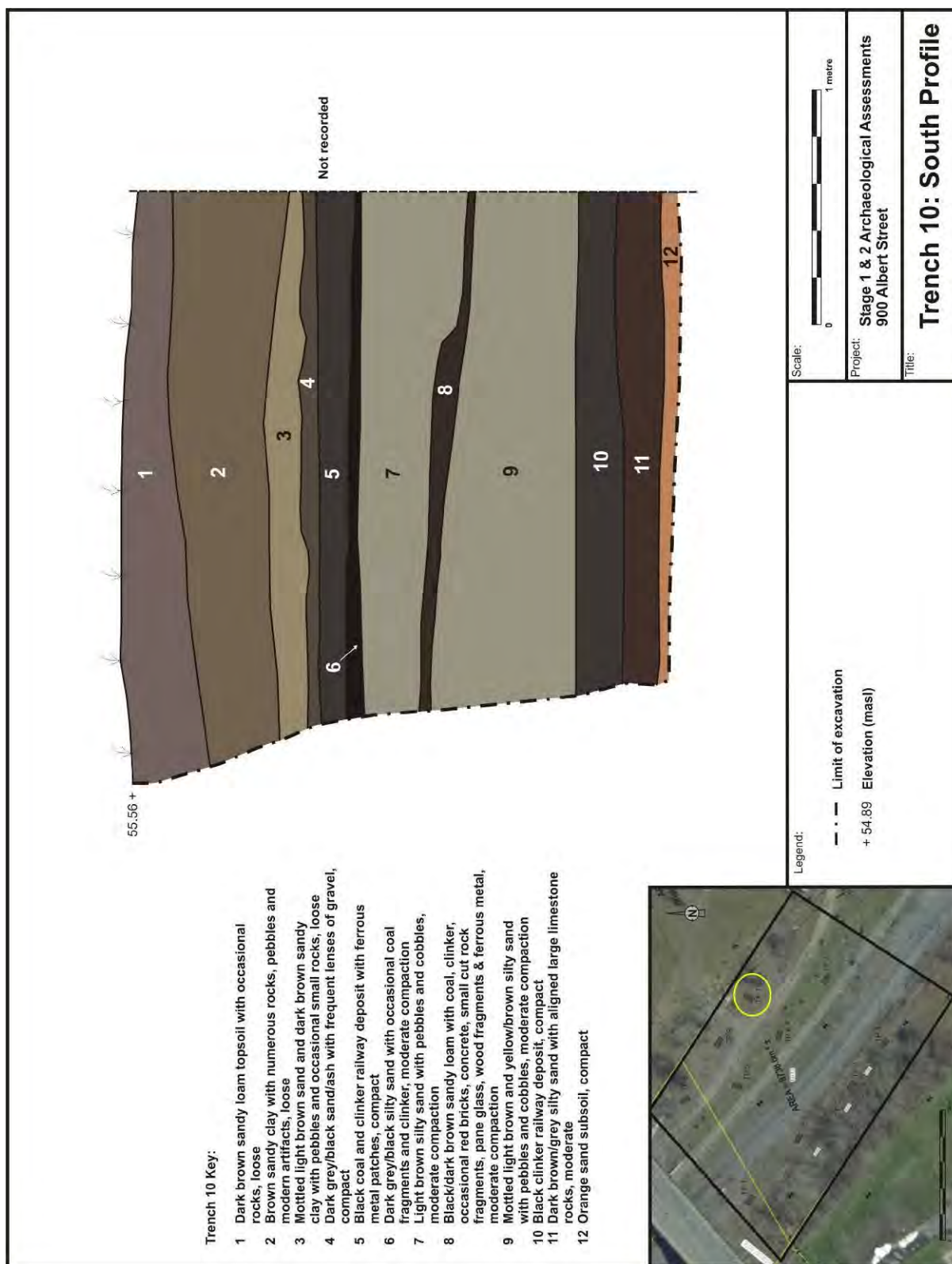


Image 47. Test Trench 10: south profile.



Image 48. Trench 10 during excavation showing the upper railway deposits (Lots 5 and 6), facing southeast. (PR15-41D086)



Image 49. Trench 10 completed showing the Lot 8 burn layer and the Lot 10 lower railway deposit, facing southeast. (PR15-41D110)



Image 50. Trench 10 completed showing the possibly aligned rocks in Lot 11, facing southeast. (PR15-41D111)

APPENDIX 1: Photographic Catalogue

Camera: Panasonic Lumix DMC-TS3

Catalogue No.	Description	Dir.
PR15-41D001	Abandoned rail line in the active rail corridor, NW section	SE
PR15-41D002	Abandoned rail line in the active rail corridor, SE section	SE
PR15-41D003	O-Train Line with abandoned rail line to the left	NW
PR15-41D004	MUP and construction yard from the O-Train line	N
PR15-41D005	O-Train Line with abandoned rail line to the left	NW
PR15-41D006	MUP and construction yard from the O-Train line	NW
PR15-41D007	Mechanical excavation of Test Trench 3	NW
PR15-41D008	Hand excavation within Test Trench 4	S
PR15-41D009	Mechanical excavation of Test Trench 3	W
PR15-41D010	Test Trench 3 during excavation	W
PR15-41D011	Mechanical excavation of Test Trench 3	W
PR15-41D012	Wood fragments in demolition layer within Test Trench 3	SW
PR15-41D013	Wood fragments in demolition layer within Test Trench 3	SW
PR15-41D014	Mechanical excavation of Test Trench 2	W
PR15-41D015	Test Trench 2 during excavation	W
PR15-41D016	Test Trench 3, west profile	SW
PR15-41D017	Test Trench 3, west profile	SW
PR15-41D018	Test Trench 3, west profile	W
PR15-41D019	Test Trench 2 during excavation showing lower railway layer	NW
PR15-41D020	Test Trench 2 during excavation showing lower railway layer	NW
PR15-41D021	Test Trench 2, east profile	NE
PR15-41D022	Test Trench 2, east profile	NE
PR15-41D023	Test Trench 2, east profile	NE
PR15-41D024	Test Trench 2, east profile	NE
PR15-41D025	Test Trench 2, east profile	NE
PR15-41D026	Test Trench 2, east profile	E
PR15-41D027	Test Trench 2, east profile	E
PR15-41D028	Test Trench 4 showing foundation wall	NW
PR15-41D029	Test Trench 4 showing foundation wall	NW
PR15-41D030	Test Trench 4 showing foundation wall	SE
PR15-41D031	Test Trench 4 showing foundation wall	SE
PR15-41D032	Test Trench 4 showing foundation wall	NE
PR15-41D033	Test Trench 4 showing foundation wall	NE
PR15-41D034	Test Trench 4, west profile	SW
PR15-41D035	Test Trench 4, west profile	SW
PR15-41D036	Test Trench 4, west profile	NE
PR15-41D037	Test Trench 4, west profile	NE
PR15-41D038	Test Trench 2, completed excavation, east profile	N
PR15-41D039	Test Trench 2, completed excavation, east profile	N
PR15-41D040	Test Trench 2, completed excavation, east profile	NE
PR15-41D041	Test Trench 2, completed excavation, east profile	NE
PR15-41D042	Rail car spring leaf from lower railway deposit, Test Trench 2	-
PR15-41D043	Rail car spring leaf from lower railway deposit, Test Trench 2	-

Catalogue No.	Description	Dir.
PR15-41D044	Rail car spring leaf from lower railway deposit, Test Trench 2	-
PR15-41D045	Test Trench 3, completed excavation, west profile	W
PR15-41D046	Test Trench 3, completed excavation, west profile	W
PR15-41D047	Test Trench 3, completed excavation, west profile	W
PR15-41D048	Overview of the study area within the active rail corridor	SE
PR15-41D049	Overview of the study area within the active rail corridor	E
PR15-41D050	Overview of the study area within the active rail corridor	SE
PR15-41D051	Overview of the study area within the active rail corridor	E
PR15-41D052	Overview of the study area within the active rail corridor from the bridge	SE
PR15-41D053	Overview of the study area within the active rail corridor from the bridge	E
PR15-41D054	Overview of the O-Train corridor and MUP from the bridge	SE
PR15-41D055	Overview of the northern section of the study area from the bridge	SE
PR15-41D056	View of disturbance associated with the Albert Street bridge	W
PR15-41D057	Overview of the northern section of the study area from the MUP	SE
PR15-41D058	Overview of the northern section of the study area from the MUP	NW
PR15-41D059	Embankment at the northwest end of the study area with Test Trench 8	N
PR15-41D060	Overview of the northern section of the study area from Test Trench 8	SE
PR15-41D061	Overview of the study area within the active rail corridor from the O-Train	S
PR15-41D062	Crew recording Test Trench 4	W
PR15-41D063	Mechanical excavation of Test Trench 8	NE
PR15-41D064	Mechanical excavation of Test Trench 9	N
PR15-41D065	Upper railway deposit in Test Trench 9	NW
PR15-41D066	Railway layer in Test Trench 8	NW
PR15-41D067	Railway layer in Test Trench 8	NW
PR15-41D068	Test Trench 8 next to the access embankment for the MUP	N
PR15-41D069	Test Trench 8, west profile	W
PR15-41D070	Test Trench 8, west profile	W
PR15-41D071	Test Trench 8, west profile	SW
PR15-41D072	Test Trench 8, west profile	SW
PR15-41D073	Test Trench 9, east profile	NE
PR15-41D074	Test Trench 9, east profile	NE
PR15-41D075	Test Trench 9, east profile	NE
PR15-41D076	Test Trench 9, east profile	N
PR15-41D077	Test Trench 9, east profile	N
PR15-41D078	Overview of Test Trenches 8 and 9	NW
PR15-41D079	Test Trench 10, south profile	SE
PR15-41D080	Test Trench 10, south profile	SE
PR15-41D081	Test Trench 10, south profile	SE
PR15-41D082	Test Trench 10, south profile	S
PR15-41D083	Test Trench 10, south profile	S
PR15-41D084	Overview of Test Trenches 9 and 10	NW
PR15-41D085	Test Trench 10, south profile	SE
PR15-41D086	Test Trench 10, south profile	SE
PR15-41D087	Test Trench 9, east profile	NE
PR15-41D088	Test Trench 9, east profile	NE
PR15-41D089	Test Trench 8, west profile	SW
PR15-41D090	Test Trench 8, west profile	SW
PR15-41D091	Railway layer in Test Trench 8	NW

Catalogue No.	Description	Dir.
PR15-41D092	Railway layer in Test Trench 8	NW
PR15-41D093	Test Trench 8, west profile	SW
PR15-41D094	Test Trench 8, west profile	SW
PR15-41D095	Test Trench 8 showing abandoned utility lines and concrete demolition	NW
PR15-41D096	Test Trench 8 showing abandoned utility lines and concrete demolition	NW
PR15-41D097	Test Trench 8 showing abandoned utility lines and concrete demolition	NW
PR15-41D098	Test Trench 8 showing abandoned utility lines and concrete demolition	NW
PR15-41D099	Test Trench 9, west profile	SW
PR15-41D100	Test Trench 9, west profile	NW
PR15-41D101	Test Trench 9, west profile	N
PR15-41D102	Test Trench 9, east profile	NE
PR15-41D103	Test Trench 9, completed	NW
PR15-41D104	Test Trench 9, completed	NW
PR15-41D105	Test Trench 9, completed west profile	SW
PR15-41D106	Test Trench 9, completed east profile	NE
PR15-41D107	Test Trench 10, south profile showing burn layer	SE
PR15-41D108	Test Trench 10, south profile showing burn layer	SE
PR15-41D109	Test Trench 10, south profile showing lower railway deposit	SE
PR15-41D110	Test Trench 10, south profile showing lower railway deposit	SE
PR15-41D111	Test Trench 10, south profile showing lower railway deposit	SE
PR15-41D112	Test Trench 10, completed south profile	SE
PR15-41D113	Test Trench 6, east profile	NE
PR15-41D114	Test Trench 6, east profile	NE
PR15-41D115	Test Trench 6, east profile	NE
PR15-41D116	Test Trench 6, east profile	E
PR15-41D117	Overview of Test Trenches 6 and 7	SE
PR15-41D118	Test Trench 7 showing foundation wall	NE
PR15-41D119	Test Trench 7 showing foundation wall	NE
PR15-41D120	Test Trench 7, west profile	SW
PR15-41D121	Test Trench 7, west profile	SW
PR15-41D122	Test Trench 6 during excavation showing wood debris in fill	NE
PR15-41D123	Test Trench 6 during excavation showing wood debris in fill	SE
PR15-41D124	Test Trench 6 during excavation showing wood debris in fill	N
PR15-41D125	Test Trench 6 showing sheet metal from fill deposit	-
PR15-41D126	Test Trench 6 showing sheet metal from fill deposit	-
PR15-41D127	Test Trench 6 showing brick from fill deposit	-
PR15-41D128	Test Trench 6 showing brick from fill deposit	-
PR15-41D129	Test Trench 6 during excavation showing lower railway deposit	SE
PR15-41D130	Test Trench 6 during excavation showing lower fill deposit	E
PR15-41D131	Test Trench 6 during excavation showing lower fill deposit	NE
PR15-41D132	Test Trench 6 during excavation showing lower fill deposit	NE
PR15-41D133	Test Trench 6 completed showing wood beam and water table	SE
PR15-41D134	Test Trench 6 completed showing wood beam and water table	NW
PR15-41D135	Mechanical excavation of Test Trench 5	N
PR15-41D136	Mechanical excavation of Test Trench 5	SE
PR15-41D137	Crew recording Test Trench 7	SE
PR15-41D138	Test Trench 5, east profile	E
PR15-41D139	Test Trench 5, east profile	E

Catalogue No.	Description	Dir.
PR15-41D140	Test Trench 5, east profile	E
PR15-41D141	Test Trench 5, east profile	E
PR15-41D142	Test Trench 5, east profile	NE
PR15-41D143	Test Trench 5, east profile	NE
PR15-41D144	Overview of Test Trenches 5, 6 and 7	SE
PR15-41D145	Trench 5 showing fill deposits below upper railway layer	E
PR15-41D146	Trench 5 showing fill deposits below upper railway layer	E
PR15-41D147	Trench 5 showing fill deposits below upper railway layer	E
PR15-41D148	Trench 5 showing fill deposits below upper railway layer	N
PR15-41D149	Trench 5 showing fill deposits below upper railway layer	N
PR15-41D150	Abandoned rail line in the active rail corridor, NW end	SE
PR15-41D151	Watermain and fibre-optic cable in the active rail corridor	SE
PR15-41D152	Initial location of Test Trench 3	S
PR15-41D153	Initial location of Test Trench 4	SE
PR15-41D154	Abandoned rail line in the active rail corridor, SE end	NW
PR15-41D155	Abandoned rail line in the active rail corridor, SE end	NW
PR15-41D156	Northern part of the study area from the O-Train line	NE
PR15-41D157	Northern part of the study area from the O-Train line	ENE
PR15-41D158	Northern part of the study area from the O-Train line	E
PR15-41D159	Northern part of the study area from the O-Train line	ESE
PR15-41D160	Northern part of the study area from the O-Train line	SE
PR15-41D161	Location of Test Trench 1 showing recent fill	NW
PR15-41D162	Abandoned rail line in the active rail corridor, NW end	SW
PR15-41D163	Abandoned rail line in the active rail corridor, NW end	S
PR15-41D164	Mechanical excavation of Test Trench 4	S
PR15-41D165	Test Trench 4 showing upper railway deposit	NW
PR15-41D166	Test Trench 4 showing upper railway deposit	SE

APPENDIX 2: Artifact Catalogue

INV	TT	Lot	#	Material	Class	Group	Object	Datable Attribute	Ware	A	Comments
0030	2	7	1	Ceramic	Architectural	Electrical	Interior Insulator	Porcelain	POR		small circular base section
0031	2	7	1	Ceramic	Foodways	Ceramic Tableware	Plate	VWE, plain	VWE		over-glazed painted red mark "...PORCELAIN/...225654 DESIGN" (registration mark possibly 1895; http://www.ebay.co.uk/gds/Registered-Numbers-Reg-No-Age-Dating-1884-1965-/10000000016925194/g.html), semi-porcelain, base rings
0032	2	7	2	Ceramic	Foodways	Ceramic Tableware	Flatware	VWE, transfer printed	VWE		blue transfer print, 'Willow' pattern, one vessel, small sherds
0001	5	8	1	Ferrous	Industrial/Comm.	Railroad	Bolt	Machine Cut			large bolt, complete, 14 cm length, 1.5 cm diameter, square turning section on head 2.2 cm per side
0008	5	10	1	Ceramic	Smoking	Smoking Pipes	White Clay, Plain Bowl	Unidentifiable			small section
0009	5	10	1	Ceramic	Foodways	Glass Beverage Containers	Hollowware	RWE, plain	RWE		part of foot-ring, small sherd
0010	5	10	1	Bone	Faunal/Floral	Bone	Mammal Bone	Burnt		B	calcined
0005	6	11	1	Ferrous	Industrial/Comm.	Railroad	Bolt	Machine Cut			large bolt, shank, 2 cm diameter, clinker attached
0006	6	11	2	Glass	Furnishings	Lighting Devices	Oil Lamp Chimney	Machine Made			possibly large light bulb, one item
0002	7	4	1	Ferrous	Unassigned	Miscellaneous Material	Hose/Tubing	Ferrous			section, 2 cm diameter
0003	7	4	1	Ceramic	Architectural	Construction Materials	Drain Pipe/Tile	Coarse Stoneware	CSW		red stoneware, glazed interior and exterior, large diameter drain tile
0004	7	4	1	Glass	Foodways	Glass Tableware	Hollowware	Machine Made			green, ribbed exterior, small diameter tumbler
0012	10	8	1	Graphite	Architectural	Electrical	Carbon Rod	Unidentifiable			carbon rod from an arc lamp, 1.5 cm diameter
0013	10	8	1	Ceramic	Architectural	Electrical	Interior Insulator	Porcelain	POR		small section
0014	10	8	1	Ceramic	Architectural	Electrical	Interior Insulator	Porcelain	POR		embossed "250V/O-30A" and "D.P.Co." on reverse (Davidson Porcelain Co. 1920-1936; http://www.r-infinity.com/Companies/), rectangular box 10 cm by 7.5 cm, two bulb slots with copper-alloy bases attached
0015	10	8	1	Ceramic	Foodways	Ceramic Tableware	Hollowware	Porcelain	POR		likely soft paste, plain
0016	10	8	1	Ceramic	Foodways	Ceramic Tableware	Flatware	RWE, other transfer	RWE		turquoise transfer print, floral, likely semi-porcelain, small sherd
0017	10	8	1	Glass	Architectural	Window Glass	Pane Glass	Unidentifiable			thick fragment
0018	10	8	1	Glass	Foodways	Glass Tableware	Handles/Pulls	Machine Made			colourless, fluting, bottom half of mug or pitcher handle
0019	10	8	1	Glass	Foodways	Glass Beverage Containers	Beverage Bottle	Turn Paste Mould			olive green, beer or wine bottle
0020	10	8	1	Glass	Foodways	Glass Beverage Containers	Gin Bottle	Mould Blown			embossed "[BLANKE]NHE[IM]/[& NO]LE[T]," olive green
0021	10	8	1	Glass	Architectural	Electrical	Exterior Insulator	Mould Blown			embossed "1678," aqua, toothed base, almost complete
0022	10	8	1	Glass	Architectural	Electrical	Exterior Insulator	Mould Blown			aqua, toothed base
0023	10	8	2	Glass	Architectural	Electrical	Exterior Insulator	Mould Blown			colourless, one item, small fragments
0024	10	8	1	Concrete	Architectural	Construction Materials	Unidentifiable	Unidentifiable			grey piece, slight curve on interior, possibly joint seal for drain pipe
0025	10	8	1	Clinker	Fuel	Cooking/Heating	Sample	Unidentifiable			industrial waste
0026	10	8	1	Ferrous	Architectural	Nails	Nail	Cut			machine made head; 7.5 cm length
0027	10	8	1	Ferrous	Architectural	Other Fasteners	Spike	Cut			22 cm length, complete
0028	10	8	1	Ferrous	Industrial/Comm.	Railroad	Bolt	Machine Cut			partial shank, 2 cm diameter
0029	10	8	1	Composite	Architectural	Nails	Nail	Wire			6.5 cm length, surrounded by melted colourless glass
0011	10	9	1	Ceramic	Architectural	Construction Materials	Drain Pipe/Tile	CEW, red unglazed	CEW		red drain pipe end section, extruded
0007	10	10	1	Graphite	Architectural	Electrical	Carbon Rod	Unidentifiable			carbon rod from an arc lamp, 1.5 cm diameter

Key:

A	Alteration
CEW	Coarse Earthenware
Comm.	Commercial
CSW	Coarse Stoneware
INV	Inventory Number
POR	Porcelain
RWE	Refined White Earthenware
TT	Test Trench
VWE	Vitrified White Earthenware

APPENDIX 3: Glossary of Archaeological Terms

Archaeology:

The study of human past by excavation of cultural material.

Archaeological Sites:

The physical remains of any building, structure, cultural feature, object, human event or activity which, because of the passage of time, are on or below the surface of the land or water.

Archaic:

A term used by archaeologists to designate a distinctive cultural period dating between 8000 and 1000 B.C. in eastern North America. The period is divided into Early (8000 to 6000 B.C.), Middle (6000 to 2500 B.C.) and Late (2500 to 1000 B.C.). It is characterized by hunting, gathering and fishing.

Artifact:

An object manufactured, modified or used by humans.

B.P.:

Before Present. Often used for archaeological dates instead of B.C. or A.D. Present is taken to be 1951, the date from which radiocarbon assays are calculated.

Backdirt:

The soil excavated from an archaeological site. It is usually removed by shovel or trowel and then screened to ensure maximum recovery of artifacts.

Chert:

A type of silica rich stone often used for making chipped stone tools. A number of chert sources are known from southern Ontario. These sources include outcrops and nodules.

Contact Period:

The period of initial contact between Native and European populations. In Ontario, this generally corresponds to the seventeenth and eighteen centuries depending on the specific area.

Cultural Resource / Heritage Resource:

Any resource (archaeological, historical, architectural, artifactual, archival) that pertains to the development of our cultural past.

Cultural Heritage Landscapes:

Cultural heritage landscapes are groups of features made by people. The arrangement of features illustrate noteworthy relationships between people and their surrounding environment. They can provide information necessary to preserve, interpret or reinforce the understanding of important cultural heritage settings and changes to past patterns of land use. Cultural landscapes include neighbourhoods, townscapes and farmscapes.

Diagnostic:

An artifact, decorative technique or feature that is distinctive of a particular culture or time period.

Disturbed:

In an archaeological context, this term is used when the cultural deposit of a certain time period has been intruded upon by a later occupation.

Excavation:

The uncovering or extraction of cultural remains by digging.

Feature:

This term is used to designate modifications to the physical environment by human activity. Archaeological features include the remains of buildings or walls, storage pits, hearths, post moulds and artifact concentrations.

Flake:

A thin piece of stone (usually chert, chalcedony, etc.) detached during the manufacture of a chipped stone tool. A flake can also be modified into another artifact form such as a scraper.

Fluted:

A lanceolate shaped projectile point with a central channel extending from the base approximately one third of the way up the blade. One of the most diagnostic Palaeo-Indian artifacts.

Lithic:

Stone. Lithic artifacts would include projectile points, scrapers, ground stone adzes, gun flints, etc.

Lot:

The smallest provenience designation used to locate an artifact or feature.

Midden:

An archaeological term for a garbage dump.

Mitigation:

To reduce the severity of development impact on an archaeological or other heritage resource through preservation or excavation. The process for minimizing the adverse impacts of an undertaking on identified cultural heritage resources within an affected area of a development project.

Multicomponent:

An archaeological site which has seen repeated occupation over a period of time. Ideally, each occupation layer is separated by a sterile soil deposit that accumulated during a period when the site was not occupied. In other cases, later occupations will be directly on top of earlier ones or will even intrude upon them.

Operation:

The primary division of an archaeological site serving as part of the provenience system. The operation usually represents a culturally or geographically significant unit within the site area.

Palaeo-Indian:

The earliest human occupation of Ontario designated by archaeologists. The period dates between 9000 and 8000 B.C. and is characterized by small mobile groups of hunter-gatherers.

Profile:

The profile is the soil stratigraphy that shows up in the cross-section of an archaeological excavation. Profiles are important in understanding the relationship between different occupations of a site.

Projectile Point:

A point used to tip a projectile such as an arrow, spear or harpoon. Projectile points may be made of stone (either chipped or ground), bone, ivory, antler or metal.

Provenience:

Place of origin. In archaeology this refers to the location where an artifact or feature was found. This may be a general location or a very specific horizontal and vertical point.

Salvage:

To rescue an archaeological site or heritage resource from development impact through excavation or recording.

Stratigraphy:

The sequence of layers in an archaeological site. The stratigraphy usually includes natural soil deposits and cultural deposits.

Sub-operation:

A division of an operation unit in the provenience system.

Survey:

To examine the extent and nature of a potential site area. Survey may include surface examination of ploughed or eroded areas and sub-surface testing.

Test Pit:

A small pit, usually excavated by hand, used to determine the stratigraphy and presence of cultural material. Test pits are often used to survey a property and are usually spaced on a grid system.

Woodland:

The most recent major division in the pre-Contact sequence of Ontario. The Woodland period dates from 1000 B.C. to A.D. 1550. The period is characterized by the introduction of ceramics and the beginning of agriculture in southern Ontario. The period is further divided into Early (1000 B.C. to A.D. 0), Middle (A.D. 0 to A.D. 900) and Late (A.D. 900 to A.D.1550).